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Winning at technology itself

The New Year is here and apart from resolutions, it is also a time for cheap introspection and armchair theorising. I wouldn't want to disappoint anyone, so here goes. After six years in the technology-media business, I am a part of the 'Tech Media Frat Boys Club', a ragtag group of technology writers who have or are currently working with big-name brands (such as *Digit*).

So, okay, we're not exactly a secret coven. We actually meet up quite openly (and often too boisterously) in establishments of less repute and discuss, among other things, technology, the street-light effect (look it up, it's a real thing), and beer (not necessarily in that order).

At some point, the conversation always takes a whimsical turn (no points for guessing when) and in one of our recent conclaves someone ended up asking this question, "What phone would you buy if you had an unlimited amount of money?". Seemingly innocuous, this question actually sent me off on a thinking tizzy. What exactly would be the deciding factor in such a situation? Technology? Innovation? Innovative technology? My comrades bandied about the usual suspects (Sony Xperia Z3, iPhone 6 Plus, HTC One M8), but when my turn came, I said I was perfectly happy with my Nexus 5, since there was nothing that I couldn't do with my Nexus 5 that I'd be able to with those phones. There's very little difference at the top end – choices at this level are not really driven by innovation – they are purely consumeristic (iSwear).

Long after the bacchanalian discussion was over, consumerism, technology, and innovation continued to swirl around in my head. What is true innovation really? It's certainly not this "incremental innovation" we see all around us today. It's easy to be dazzled by large-screen TVs, drones, 3D printers, and even our handy, almost magical, smartphones. These creations seemed impossible even a few decades ago and one might argue that we are at the pinnacle of technology. But this is simply not true.

We have had at least two golden eras of true innovation. The industrial revolution, followed by the age of electrification, led to unforeseen advances in manufacturing and transportation. The period, from the end of the second world war (1945) up to the Watergate scandal (early 70s), saw huge achievements such as the moon landing, the invention of micro electronics, computers, civil aviation, television, and antibiotics. To use Google's phrase, all these are examples of "moonshot thinking" – these were good solid innovations, nothing remotely 'incremental' about them.

Science author Michael Hanlon calls this period "The Golden Quarter". He believes we stopped truly innovating since then, and I agree. Take an example of mass transportation over great distances. In the 1950s, the best passenger liners took four days for a transatlantic voyage. With international civil aviation taking off (mostly in the 70s with the jumbo jet), the travel time fell to just 8 hours. By that same progression, by now we should have had a mass-transport system that takes us across the Atlantic in just 40 minutes! There are many such examples that show that technological innovation is stagnating – by now we should have been commuting to the moon, landed on Mars, and cured cancer. Tyler Cowen, in his 2011 essay, *The Great Stagnation*, talks about how America harvested the "low-hanging fruit" of technological innovation and is slowing down due to a lack of true innovation.

But why have we stopped innovating? As it turns out, my jab at consumerism is far closer to the truth than I'd like. Money, whether it's shareholder wealth or venture capital, is only flowing to companies that are able to post growth on their financial statements. And one of the surest ways of doing this is by planned obsolescence and creating a market for 'incrementally' better products with high aspirational value. It's the safest bet. Why bother pouring money into R&D for a hoverboard? Of course, the problem isn't as simple nor as isolated as consumerism. The topic is too vast and multifaceted to be discussed in an editorial (involving factors like philanthropic funding for research, government will, lack of motivation, war climate, etc.).

Coming back to matters at hand – in this issue of *Digit* you'll find a ton of things you could do to win at everything *using* technology. With this editorial I'm trying to address the need to win at technology itself. Thankfully, there are stalwarts such as Elon Musk (almost a real-life Tony Stark) who are truly innovating, not just for wealth creation, but for innovation itself. His Hyperloop concept, the open sourcing of Tesla patents, SpaceX, are being closely watched and in the coming year, and through my life, I fervently hope for innovation, big or small, especially from India. On that note here's wishing you a happy new year and a chance at winning *for*, *with*, and *at* technology! 🇮🇳



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"It's easy to be dazzled by large-screen TVs, drones, 3D printers, and even our handy, almost magical, smartphones."

A handwritten signature in black ink, appearing to read 'Siddharth Parwatay'.

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Win at overcoming technology overload



Jayesh Shinde
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"We still struggle to grapple with this always-on, interconnected digital world we've surrounded ourselves in."

For the longest time, we've welcomed technology with open arms in every facet of our complicated lives. From the first television set we operated with a knob to the first arcade console we played 8-bit games on with great aplomb; from brick-like cell phones to the fathomless expanse of the Internet. We've grown up in a world where the digital world has exploded all around us within just over a decade. Some may consider this to be a feat of human ingenuity, a landmark celebrating the progress of our species and collective civilization, but there's no running away from the fact: we still struggle to grapple with this always-on, interconnected digital world we've surrounded ourselves in. While some of us are all at sea trying to exploit and fit into this new reality, others find themselves addicted to digital triggers dictating their life patterns to an overwhelming degree. Technology, and in particular Internet-overload is a reality and it's driving us to the point of no return. I have no doubt that it's a generational issue that we have to resolve, since we created this digital world that we now co-exist in – our kids, who probably will never know what life before the Internet era looked like, will adjust to this digital reality far better than us merely by the virtue and timing of their birth.

I've pretty much grown up with the personal desktop computer and Internet explosion era in India. I remember a time when I used to play football (or soccer) outside with my friends instead of FIFA 2015 with a bunch of online strangers; read traditional books and newspapers more than read for pleasure on my Kindle and consume information on my laptop, tablet and smartphone; meet friends for lunch on weekends rather than just chat with them online or lookup their Facebook feeds. Take my future wife out to cinema halls to watch the monthly blockbuster together rather than entertain ourselves through the contents of a hard drive connected to a laptop or HDTV. And I sure as heck do remember a time when I wasn't a slave to my phone like I'm now, constantly transfixed by it, caught under its vicious spell without any sense of control. This addiction, if you can call it so, was getting so destructive that I would hear phantom phone calls, twitch and tense up every time I heard any phone ring, sit on my arse too long than is good for my health, and invite the

Internet into my life without any checks and balances. Big mistake. Wasn't technology supposed to help and heal? But why blame technology if a certain human is too stupid for his own good?

How does one keep a modicum of sanity into their life and prevent technology and the Internet from becoming a health hazard? It's simple – disconnect. Not once or twice, but from time to time, in a habitual, preordained manner. Recent studies have shown that our over-indulgence with the Internet and an always plugged-in lifestyle is affecting our mental and physical health far worse than our parents or grandparents. More studies have also shown that unplugging ourselves from the digital world and spending uninterrupted, quality time away from our devices boosts our brain's productivity. It's like working Monday to Friday, relaxing on Saturday and Sunday to re-energize, rest, and come ready to focus on work again on the following Monday – the same concept applies with our digital lives to some extent.

That's essentially my New Year's Resolution – to heavily curtail and control the use of technology (and the Internet) in my life. To that effect, I've already started switching off my phones on weekends – unless I want to call someone by choice – and I recommend all of you to give this a shot just to experience the unshackling effect it can have on your life. Making adjustments to my Internet affliction won't be easy, but the tradeoffs are too great (like quality of life, mental well-being, social engagement, etc) to not give it a shot. Especially, entrusted with the responsibility of bringing up our daughter in an overbearingly digital world, I at least want to let her experience, in however small way possible, the world as it is beyond digital marvels. This way, at least she will have a better appreciation of technology in her life than be just hooked on to it without knowing its self-destructive flipside. And avoid or learn from the mistakes of her once digitally challenged father. 

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Win at losing

No, I'm not talking about losing weight here, as most others who use that phrase generally mean. What I mean is learning from our mistakes, building character, and all of that... Everyone is good at winning, it's when you're losing that your mettle shows. Real winners have almost always lost a great deal during the course of life, and it's what makes them successful. However, I don't mean for this to become a random, generic rant. I'm being specific about technology, and the way we interface with it.

I recently met a friend who was complaining that his Nexus 7 just stopped working. As a fellow owner of the device, I've had some experience with dropping it and the battery coming loose, and then the battery connector getting dislodged. What did I do when my Nexus 7 died? I did a quick search on YouTube to see if there was any special trick to popping it open, and when I learnt that there was none, I opened it up, saw the loose connector, reconnected, booted up, ensured all was well, snapped the back cover in place again – about 15 to 20 minutes of tinkering, and my tablet was as good as new.

When I told him to do this, he said he'd rather give it to the service centre. It's only after I insisted that he let me open it, with reassurances that I'd use my clout (I have none, believe me, I was bluffing) to get him a new Nexus if something went wrong. Turns out it was the same problem, and was sorted in 15 minutes (no YouTube video to watch this time) – the device was as good as new.


This is the problem with technology today. We just don't lose enough to it to get any better at winning with it. People who love Apple usually say it's "Because it just works", and in many ways that's good, but in a few ways it's terrible as far as I'm concerned. I hate not being able to tinker. The only reason I love technology with a passion is because I can tinker. Or at least I was able to, with PCs and the likes, a lot more than with all these gadgets. I still can with software, but I'm pathetic with code.

Thus I find myself happily voiding warranty, rooting, jailbreaking, etc., because it's *my* device, I paid for it; or even if it came for testing, I am willing to pay for it if I ruin it whilst tinkering (and I have ruined and paid for a few over the years).

When it comes to voiding warranty, I won't let some idiotic company dumb me down and turn me into some brain dead robot with a threat of withholding some service just because I'm inquisitive. If I lose money by being a tinkerer, it's OK, it's only money and I can earn more eventually, but I don't want to get soft by not fighting troubleshooting battles and eventually losing the war against idiocy in the bargain.

It's not just troubleshooting, it's also tweaking, understanding the device better and making mistakes. I installed beta and leaked versions of BlackBerry OS 10.3 on my phone a few months ago and corrupted my data. I wasn't able to backup or restore anything to the phone and had to format it. I lost about 10 days of SMSes, some contacts, and other random data (the new stuff since my last successful backup). I'm still going to continue to try beta or even alpha software, I'll just backup more often when using it... lesson learnt!

Losing to technology is always, only temporary, and that's the beauty of it. I've been getting my @\$\$ kicked by some problems on the forum for months now. I've narrowed it down to the forum software not playing well with our server configuration. Those of you on the forum will know the file upload and IP problems I'm referring to. Like I said, technology is winning right now, and I'm losing miserably, but sooner or later I will triumph, and will have reduced the ways tech can beat me in the future by one.

I know I'm preaching to the choir, because Digit readers by definition are tinkerers, but I just wanted to make sure to remind you to keep trying new things and not fear losing. With technology, losing initially is the only true path to winning eventually. So, get out there and start losing to technology every now and then, or else you're not trying to win hard enough. 



Robert Sovereign-Smith
Executive Editor
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"I find myself happily voiding warranty, rooting, jailbreaking, etc., because it's my device, I paid for it; or even if it came for testing, I am willing to pay for it if I ruin it whilst tinkering (and I have ruined and paid for a few over the years)"

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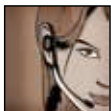
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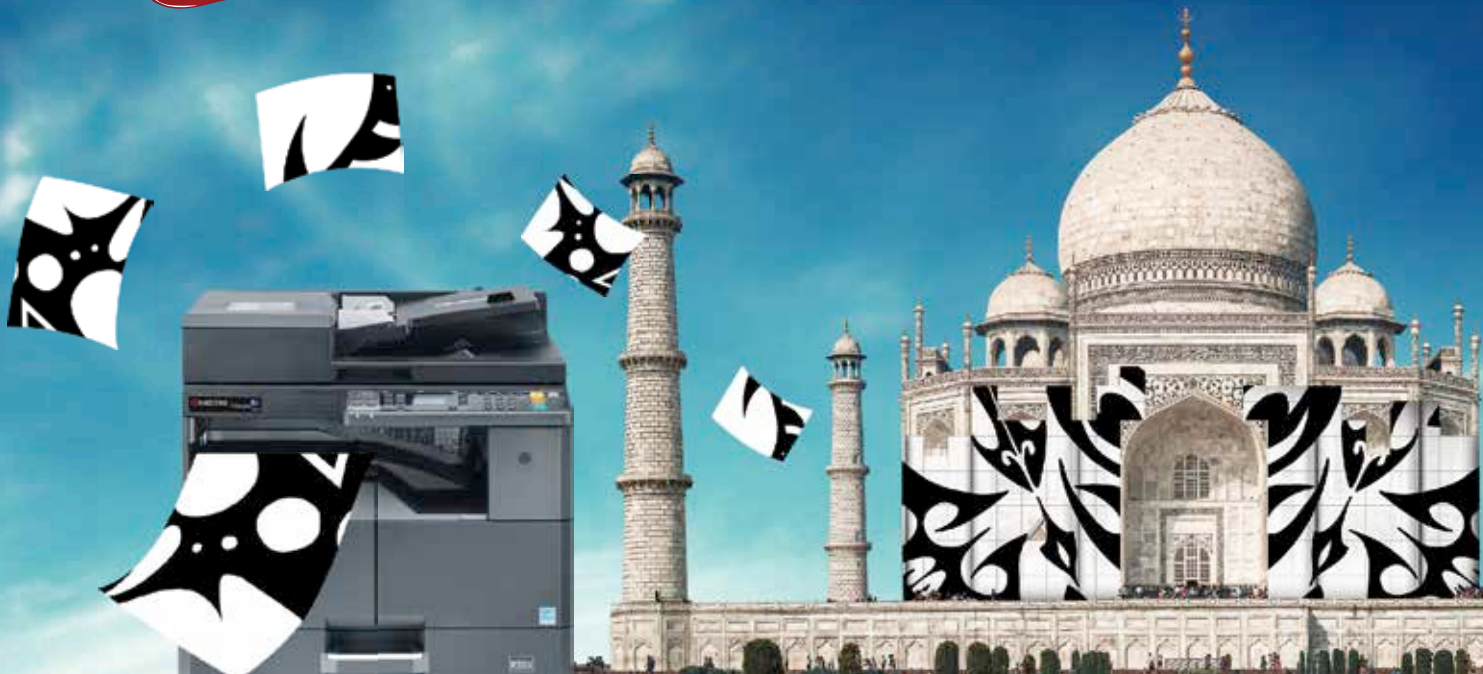


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Rocksmit 2014
Rocksmit 2014 is the ultimate guide to all the latest tech products. It's a must-have for anyone who wants to stay up-to-date on the latest tech products. It's a comprehensive guide to all the latest tech products, from smartphones to laptops, and everything in between. It's a must-have for anyone who wants to stay up-to-date on the latest tech products.

Gadgets to drool over your New Year's Resolution

Kindle Paperwhite
Kindle Paperwhite is the ultimate e-reader. It's a must-have for anyone who wants to read on the go. It's a comprehensive guide to all the latest tech products, from smartphones to laptops, and everything in between. It's a must-have for anyone who wants to stay up-to-date on the latest tech products.

Acer Chromebook C720
Acer Chromebook C720 is the ultimate laptop. It's a must-have for anyone who wants to work on the go. It's a comprehensive guide to all the latest tech products, from smartphones to laptops, and everything in between. It's a must-have for anyone who wants to stay up-to-date on the latest tech products.

GoGii
GoGii is the ultimate fitness tracker. It's a must-have for anyone who wants to stay fit. It's a comprehensive guide to all the latest tech products, from smartphones to laptops, and everything in between. It's a must-have for anyone who wants to stay up-to-date on the latest tech products.

Fujifilm X30
Fujifilm X30 is the ultimate camera. It's a must-have for anyone who wants to take great photos. It's a comprehensive guide to all the latest tech products, from smartphones to laptops, and everything in between. It's a must-have for anyone who wants to stay up-to-date on the latest tech products.

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Gadgets for a smart home

MAKE THIS ISSUE OF DIGIT COME ALIVE



Step 1

Download the Blippar app



Step 2

Keep an eye out for the Blippar icon next to some images



Step 3

Blip the image and get access to video reviews, interactive games, and much more!



56 Space Age

Everything you wanted to know about NASA's Orion deep space craft.



104 Industry Connect

We speak to Dr. Jordan Brandt, Manufacturing Technology Futurist at Autodesk on 4D printing, the Indian Maker movement and more.

PLAYSTATION EXPERIENCE KEYNOTE

digit DVD

PHOTOSHOP TUTS



90 XIAOMI PISTON 2 IN-EAR HEADPHONES

Budget audio done right



91 SIMPLEAUDIO GO

Simple yet superior

ON THE DVDs

Alpha Get Programming

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Adobe Photoshop CC
Photoshop effects tutorials

Essentials

Avast Anti-virus
Foxit Reader
Handbrake
ImgBurn
iTunes
K-Lite Codec Pack
Thunderbird
and many more...

Playstation Experience

PS Experience Keynote

Sponsored Software

Ashampoo Burning Studio
ProDot Antivirus
Stellar File Wipe

Omega Free to Play Games

Dead Island: Epidemic
Lambda Wars

Game Demos

Defence Grid 2
Of Guards and Thieves

Documentary

WoW: Looking for Group

Drivers

AMD desktop APU drivers
32/64 Bit
AMD desktop graphics drivers
32/64 Bit
NVIDIA desktop graphics drivers
32/64 Bit

Movie Trailers

Hot Tub Time Machine 2
Jurassic World
Mad Max: Fury Road
Terminator Genisys
and many more...



dgt

It's back, and it's inside Digit. It's still a work in progress, but send us feedback about it. We're going to try and integrate it seamlessly, so your feedback will be valuable

✉ Greetings to 'THE' Team!

Let me start with a story. I was in my 5th standard and I thought of buying some magazines (of course it included champak). I was a newbie in computers and I had just about learnt Logo and Basic. I was busy with my dad's Sony Ericsson phone and suddenly I saw something attractive. It was a tech magazine. I picked it up ₹100 the cover said. I kept it back but after five minutes I came back and returned all those comics and took Digit. Yeah that's where it all started. Now I am in std 12th preparing for my board exams and my mother has forbidden me from buying all these magazines. But when I saw your ad (giving away November issue free with the December issue I just couldn't resist. You are my saviour from all the boring studies I have to do. I do have some suggestions though:

- Your mobile site is too slow. Try reducing some ads. That ruins the experience.
- In the Spend Smart section, please try to arrange the products in increasing order of price
- Please add some music gadgets (Amplifiers, DJ Consoles and the like)
- If possible try including all the PDFs of Digit in your DVD next month.
- Technology doesn't mean just computers. Please put some info about renewable energy sources or Space Science) That would surely add Stars to the magazine.

Last but not the least, great Job guys!

– Kaushik Ghosh

Thanks for sharing your story of discovering Digit. I remember mine just as clearly. About your suggestions let me take them up one by one:

- Agreed the site is slow. We're working towards making it faster.
- Good point it should be ascending. Changed from this issue onwards. Thanks!
- We'll try to add more of these gadgets.
- PDFs only come bundled with the June issue so be



Everyone wins a t-shirt this time!

Feedback for the December 2014 issue of Digit



sure to pick that one up this year.

- I think you've been away from Digit far too long Kaushik. We've been doing a lot of core science. In fact some would say we've been doing way too much of it. We have had an entire section called Space Age for the past two years now. Do check it out in this month's issue.

– Siddharth

✉ Hello Team Digit,

Your magazine defines awesomeness for me. The happiness which I get when I buy Digit on 1st of every month is equivalent to a person's happiness when he gets his salary on 1st of the month. Your December edition was a dynamite of information and

entertainment. I was eagerly waiting for Zero1 awards and you did a splendid job in zeroing down the best products in each category as always. The final edition of Encyclopedia Technica was just as amazing as the previous four editions. The new add-on "Rewind" was the best yearbook for technology so far that I have ever read.

Well I have two suggestion for you:

1. You are so popular, why don't you organize a big tech show or exhibition like CES. I am sure will attract a lot of companies and tech firms who will be ready to showcase their products and services at your event. You can also organize some gaming or tech quiz sort of thing there. I have no doubt that DITS (Digit International Tech Show) will be a huge success! And if this happens don't forget to invite me as the chief guest! (Just kidding free passes would be enough)
2. You get so many products for testing, do you return all of them? If not why not give those as prizes for small contests like in earlier days there used to be "Beat that Digit Caption" contest? It would be a good treat for gadget lovers.

I wish all the very best and Happy New Year to team Digit for the year 2015 and keep rocking like you always do!

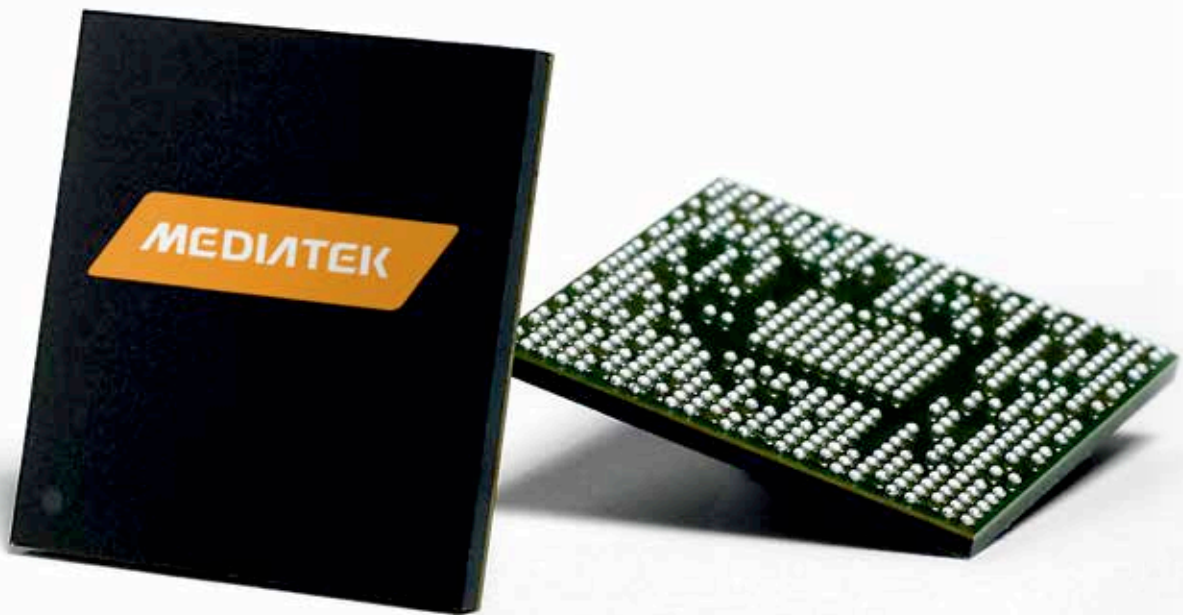
– Rohit K. Dhanda

Thanks for the wishes Rohit. We'd love to have an international expo under the Digit banner. However the economics should work out. Your suggestion is duly noted and will be taken up with management in our next edit meeting. As for the gadgets, I wish I could tell you that we get to keep them all, but I can't.

– Siddharth

MediaTek MT6592

The World's First True Octa-Core Processor for Smartphones



True Octa-Core Mobile Platform

Octa-Core 1.7-2.0GHz

- All 8-cores can run at full speed at the same time for more concurrent apps
- Industry-leading Dual-Cluster/Dual-Active (DCDA) architectural design

Powerful Mali450-MP4 Graphics Core

- Clocked at 700MHz, delivering 152Mtri/s and 2.8 Gpix/s performance
- Providing uncompromised user experience for Full-HD display at 60fps

Advanced Multimedia Features

- 1080p 30fps Video w/ World-first HEVC & VP9 playback support

- ClearMotion Technology : Motion-Blur Free Video Playback as 60 fps
- MHL 2.0 support for multi-screen applications/ultra-portable PC - High-Fidelity 24-bit Audio support

Android v4.2.2 "Jelly Bean" and v5.0 "Key Lime Pie"

Chromium browsing experience on mobile phones/tablets

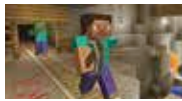
Multiple-window, laptop-like experience on mobile devices

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For Local Enquires: sales.india@mediatek.com / Tel: +91 120 4343900



Minecraft story mode

TellTale games is developing a story mode game for Minecraft, announces Mojang



Steam controller leak

Still waiting for the Steam machines to be available, a new image of the controller has leaked again.

LETTER OF THE MONTH

✉ Dear Team Digit,

Congratulations on completing another glorious year and still standing tall as "The Best" technology magazine in India. Although I have been a reader since long, this is my first ever letter to you so bear with me because this is going to be quite long.

1. Tell me how in the world do you manage with a 51 INR discount along with a coupon of the same value? Considering the stuff in print along with the DVDs that's brilliant.
2. Skoar finally gets a full print but frankly speaking, I was never a fan, I like playing games more than reading their reviews and dreaming of playing them! Of course, that is because I get all the latest games for free (you know how).
3. Omission of the third DVD and addition of a poster was not welcome. You should not be surprised to know that my poster is not in a condition to put on a wall, thanks to the folding. And Splinter Cell, really!? A Lambo from Most Wanted would've been better.
4. Coming to the DVDs, I suppose you forgot the Essentials section this time, maybe its because that has become common in Digit DVDs. Alpha DVD is awesome, quite nicely packed. The UX design videos along



with the devworx section has been very well-presented.

5. The magazine itself is a wonder. Blippar was a new concept. All the Sci-Fi stuff that you talked about made me really excited to see our world in the future. About product reviews, you guys have great contacts I must say. How did you manage to get your hands on the OnePlus One, even before its launch! I am looking forward to an internship next summer, especially because I want to test all the latest products. Do let me know if that is possible.
6. I noticed a few typos here and there and oh my, I did find some grammatical errors as well. Now considering the amount of efforts you guys put in, such mistakes can be ignored once in a while but then we are talking about Digit!
7. Rewind was a delight to read. Again generating that Sci-Fi excitement! Arduino did great as a sequel to "Make your own Robot" (after a long time). I would really love a FastTrack on setting up liquid coolants (pipes, reservoirs and all) particularly focused on laptops as they need more cooling.
8. In this issue, a reader reported that your shortened links showed a 404 error so I did some testing and found out that "http://dgit.in/abc123" works perfect while "http://www.dgit.in/"

abc123" shows a 404 error. Now I have seen "ABC.com" and "ABC.net" leading to different sites or a 404 perhaps if one of them has not been registered but how do you explain this? The same error doesn't occur with "goo.gl" links though.

This brings me to the end of my long tale. You can always omit the parts that you didn't like while putting this into print (I won't mind, seriously). Thanks for making such a wonderful magazine and refining it from time to time. Keep up the good work everyone.

P.S.: Shirt size - XL (just in case, you know)

– Swastik Padbi

📧 Talk about dropping hints Swastik! But ok we'll bite. Enjoy your T-shirt! As for your letter:

1. We don't eat for days to enable that discount Swastik. Savour it.
2. Stay where you are, a police officer has been dispatched to your address and should be reaching there anytime now ;-)
3. How about Far Cry 4?
4. Thanks. Do let us know how we can make the DVDs better though. Abhijit our new DVD guy is waiting for your feedback.
5. Sure send us your CV!
6. Yes we need to be more careful.
7. Sure we'll look into your idea.
8. Good catch. We'll implement a redirect.

– Siddharth

✉ Dear Digit,

What could be a better way to end this year's final issue? Interactive cover page was a great trick. Columns written by Siddharth, Jayesh and Robert really make us think for a moment about whether its technology or "tech-no-logic" and the hint of wittiness is what adds flair to your writing.

I would like to address few points.

1. We've witnessed transition of Digit Mag over the years tech based magazine to "interactive tech magazine." Kudos!
2. Inclusion of all issues of Encyclopedia Technica & FastTrack has been a boon

for people like me. The DIY VR Headset was awesome too and expecting a similar feature regarding Google Glass.

3. Product prices in the magazine aren't consistent.
4. Can your team start a SMS Notification service for all subscribers? Keep navigating and digitizing!

– Sandeep Tidke

📧 Thanks for the words of encouragement and specific feedback. We're working on point no 3 and 4. Stay tuned.

– Siddharth

✉ I am writing this as an extremely aggravated fan of what was once an iconic magazine. I have been reading Digit since April 2002. So I am almost as old a reader as the magazine itself. I have seen this magazine undergo various happy transformations through the ages. I have not skipped a month ever since to get my hands on a copy of this magazine. There were a few sad times too. But none was as bad as this – now I'm simply not excited enough to buy my copy every month.

I am really frustrated at the quality of packaging you folks provide.



PC Wall Mount

Paintings on the wall are fine, but what if we tell you that you could mount your PC components too?



Sony OLEDAffordable Attachable

Sony is preparing to launch a smart accessory at CES 2015 that turns your eyewear into a set of smart glasses

Inbox

From the past 5-6 months, there hasn't been one issue where I've tried hard not to tear anything apart while opening the package and removing those bits n' pieces of tape and yet failed I've miserably. Please don't give me that prices excuse. You already have almost increased it to 1.5 times in the past 9 years.

Now about the content: I am sorry but it is almost going down the drain. I was always excited to see what the Test Centre had for me this month. But not anymore. There was a time when you guys had reviewed 20-30 graphics cards, laptops, branded desktops, smartphones, digital cameras, hard disks and even ubiquitous things like headphones/earphones and pen drives. Now even Agent001 also does not cover any exciting products.

What went wrong? Is it a reflection of the declining state of the PC market that your June & December issues are barely anything more than the rest of the months? Back then (in 2003 or so) I was used to the idea of getting as many as 4-5 CDs with the December issue. This time I just got two. I have almost 2 to 3 drawers in my cabinet full of your CDs & DVDs.

Heck now even the writing team doesn't seem as enthusiastic to me. So many people just came and left - Deepak Ajwani, Sachin Kalbag, Robert Smith to mention a few. It's almost like being full of mid 90s kids who got an iPod / iPhone before they were 18, but are far less inclined to "actually" learn anything about tech like those kids of the 80s where it all started. They're more about show-off-cool-stuff-to-the-others who know the so-called status rise a tech product brings with it but not the value or the power that it has.

Over these 12 years I've also bought and seen off many other tech magazines simply to fulfill my tech appetite - PCQuest, IC Chip, PCWorld, Linux / Open Source For You. PC World and IC CHIP are dead now.

Then yours was a different product I used to wait for. Now it's just another one of those run-of-the-mill publications. Is this what success / lack of competition does to people? Now I need to know if you really want to improve the quality or will I have to wait for another publication to acquire you or take you over? Or is this a reflection of change in who's in command

- the flag-bearing company? 9.9 Media has disappointed me over Jasubhai Digital Media. Please accept your faults and truly take charge of what you're delivering to your readers.

Yours always,

- Siddharth

Hey Siddharth,

Just wanted to start by telling you I doubt anyone ever "leaves" a brand like Digit. However, since Digit still pays my salary, I most definitely haven't left... I may, at some point, stop being an employee of Digit, but it won't stop me being a reader...

We take the critical feedback far more seriously than we do the adulation, because that's what's kept us grounded all these years. We know we can always do better; always!

Let me address the very valid points you make in your criticism, and I'll be as straight-forward with my answers as you were with your email, because I think you'd expect that:

Packaging

Agree wholeheartedly. There's nothing more frustrating than ruining a magazine by tearing the cover. We will look into this once again to try and see what's going wrong. We buy the best 3M tape to prevent this from happening. We will try and get to the bottom of this once and for all. Thankfully the subscriber copies are saved from this headache.

Prices

This is a sore point. For you and for me. No one likes to pay extra, and yet no one likes to sell at a loss. Yes, we have, in 13 years, raised the price of the issue 100%. You tell me if you would work for 13 years at the same job and settle for only double the salary 13 years later? The other mags you mentioned were businesses first, this one isn't, which is why it's still alive.

Content

I agree. I loved the 30 GPU comparisons too. The 100 GPU comparisons even better, and the 30 CPUs, 65 HDDs, 40 inkjet printers... every single comparison was brilliant and diverse. Today, companies themselves aren't making that much variety for PC peripherals, and even if they're selling in

the market. For the non-PC stuff, there have been challenges with getting the products to come in on time, or at all. Some companies have decided to steer clear of comparisons. It's largely a dumb buyers market, and that's perfect for brands, and terrible for people like you and me (as tech enthusiasts). We are working on trying to change this.

CDs / DVDs

Sadly, this increasingly mobile-centric world of ours means that more and more Digit readers write in and tell us to do away with the DVDs altogether. We have to slowly but sadly accept the fact that we will have to disappoint the minority who still want them. Don't expect special issues in the future to be any different in terms of number of DVDs. :-)

Writing Style

Although subjective, yes I suppose you're right in the sense that the new generation of writers are those who have always had technology, and perhaps lack the emotional connect or the awe that we did when we started out. However, this does not mean nothing awes the new age writers... I still think we're quite in-depth and unswayed by fanboyism though; do you have any specific instances you would like me to clarify or look into?

The Rest

As for JDM and 9.9, trust me, it's just a perception you have. Digit has always been left to itself to run as a mag that's for enthusiasts, by enthusiasts. With 9.9 we went through a terrible recession, and I know first-hand how tough times got, but we functioned in a protective bubble, almost oblivious of the financial chaos all around.

This freedom that we've always been entrusted with also means that not only do we get to take credit for the adulation, we also have to accept the brickbats as well... it's NOT the company that's failed you, it's us, the editorial staff.

I really want to be able to wow you and readers like yourself again. I want you to be waiting eagerly for Digit again. Let's find a way to do that together... Maybe we can get a group of long-term readers like yourself together and have a reader meet, or make a small party of it all... What say?

- Robert

GREED

For those who just want more than should be humanly allowed, we have enough to satisfy your hunger...

This month: A watch worth \$200,000, a Lamborghini for \$7 million and a Yacht that's a mere \$30 million, plus more...

TEMPTATION

If you're wondering what to do with yourself or how to spend some time getting cultured, this is for you...

This month: The Interview, Predestination, Autómata, Pink Floyd, adventure holidays and more...

Technology with Style



BlackBerry Classic

Hated the BlackBerry Passport but still want a QWERTY phone? You're not going to get too many quality options for keyboard phones these days, and chances are your best bet will be a BlackBerry when it comes down to keyboard quality. We haven't reviewed it yet, so we obviously can't recommend it, but turn to our Connections section for more on this launch. Price: \$449

DESIRE

Google's driverless car coming in 2015

Shows off the first finished prototype

On December 22, 2014, Google unveiled pictures of the first fully-functional prototype of their self-driving car project.

The car still has manual controls and is used by test drivers, but it's only a matter of time, we think, before cars are things that just take you places, and not silly mechanical idiots who humans need to control.

Anyone who's ever been stuck in a traffic jam in one of India's large cities, knows the importance of having some order to traffic.

For us, this is worthy of launch of the month, even



though it's not a finished product, because of the promise it holds. Imagine a not-so-distant future, where you never

need to drive, and can just doze on commutes instead! It's cute looking too, and it reminds us of the Nano just a tad.

LAUNCH
OF THE
MONTH

iPhone 6 mini?

If rumours are to be believed, you may soon see an iPhone 6 mini from Apple – 4.7-inch display, and hopefully it won't bend! <http://digit.in/apple-iphone-mini>



Pay for VoIP?

Airtel has started charging people for VoIP calls, and we fear others may follow suit. This is against the idea of Net Neutrality. They say they're launching a data pack for it, but the fact is it's now being charged! <http://git.in/airtelvoip>

Ara confirmed

A modular phone from Google. <http://digit.in/araconf>



15m on 4G

PwC says India will have 15 million 4G users by the end of 2015. This exponential growth will come because of affordable smartphones being available in India, and the MSPs push towards it. <http://digit.in/PWC-4G-Forecast>

Dedicated Supplier of M2M Wireless Modules



M10 GSM/GPRS

84-pin LCC
850/ 900/ 1800/ 1900MHz
PPP/ TCP/ UDP/ HTTP/ FTP/ SMTP/ NITZ/
NTP/ POP3/ SSL
CE/ FCC/ GCF/ ICASA/ PTCRB/ UCRF/ IC/ NCC/
Rogers/ ANATEL/ TELCEL



M72 GSM/GPRS

30-pin LCC
900/ 1800MHz
PPP/ TCP/ UDP/ HTTP/ FTP/ SMTP/ MMS sending/
NITZ/ NTP
QuecLocator/ Jamming Detection/ QuecFOTA/ MUX
CE/ UCRF/ GCF/ A-Tick

HOT



M85 GSM/GPRS

83-pin LCC
850/ 900/ 1800/ 1900MHz
PPP/ TCP/ UDP/ HTTP/ FTP/ SMTP/ NITZ/ NTP/ MMS/ SSL
DualSIM/ eCall/ Jamming Detection/ QuecFOTA/ DTMF/
MUX/ RIL/ OpenCPU/ SD/ PCM
CE/ GCF*



M95 GSM/GPRS

42-pin LCC
850/ 900/ 1800/ 1900MHz
PPP/ TCP/ UDP/ HTTP/ FTP/ SMTP/ PING/
MMS sending/ NITZ/ NTP/ SSL
DualSIM/ eCall/ Jamming Detection/ QuecFOTA/ DTMF/
MUX/ RIL/ QuecLocator
CE/ FCC/ GCF/ ICASA/ PTCRB/ UCRF/ IC/ NCC/
ANATEL/A-Tick/ Vodafone/ Rogers/ TELCEL

HOT

Smallest
GSM/GPRS
Module



L80 GPS

GPS/QZSS
16.0 x 16.0 x 6.45mm
High Sensitivity -165dBm
Default baud rate 9600bps
Voltage 2.8V to 4.3V Typ 3.3V
Low power consumption: 20mA@Tracking mode;
25mA@Acquisition mode; 7uA@Backup mode

HOT



L76 GNSS

GLONASS/GPS/QZSS
10.1 x 9.7 x 2.5mm
Very low Power consumption
Easy technology without
external EEPROM
Pin to pin compatible with
GPS L70

HOT

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Sony's clip-on glasses display

Sony announced a new attachable display module that can turn any existing pair of eyewear into smartglasses (like Google Glass, but on any eyewear!). It's powered by an ARM Cortex-A7 Processor, has a 640 x 400 OLED micro display, and comes with Bluetooth and WiFi connectivity. It will be showcased at CES about the time you're reading this, so look for it in our coverage online at digit.in.

Jaguar Land Rover's augmented windscreen experience

The attempt here is to eventually give a driver a 360 degree view of his surroundings, by making opaque parts of the inside of the car, essentially, see-through. That's not all however, there is also an attempt to increase safety by displaying routes and information right on the windscreen itself. While some may argue against displaying anything on a windscreen, Jaguar Land Rover claim that the displaying of a car to follow on the wind screen as a way to give directions to a driver is the safer way. It also displays warnings of what's in your blind spots, such as someone crossing the road. Read more at: <http://digit.in/1Epp2iK>



Shooting blanks? Not for long...

Scientists might soon be able to "cure" infertility. Yes, you read that right. Not that the world at large needs more babies, but only the infertile know how much it sucks to be them. Using stem cells, Israeli and UK scientists were able to reproduce (pun intended) egg and sperm precursor cells from a person's skin cells. Now if the world would stop fearing stem cell research and relax some of the laws that prohibit important aspects of research in this field, maybe, just maybe, we'd all benefit from advanced biology research. Cure balding already! <http://digit.in/vhtendms>



BMW M3 & M4 Coupé

We recently attended BMW's launch event for their 2015 M3 and M4 Coupé models at the Buddh International Circuit in Greater Noida. Sachin Tendulkar was there to flag off the cars at the event. Essentially both of these are very similar cars – both are powered by a 3.0 litre straight-six engine with turbo chargers, so performance is identical. BMW has managed to extract more power from this new V6 engine than the output of the V8 that it replaces, which means more power, but reduced pollution and an increased fuel efficiency to keep the tree-hugger types from picketing their gates.

Both cars take 4.1 seconds to go from standing still to 60 mph (and no 60 mph does not equal 100 kmph as many lazy writers of all things auto will have you believe!). They have their top speeds limited to 250 kmph, and in some special circumstances this can be increased to 280 kmph,



though we'd rather it was lowered for India. We've seen our fair share of rich spoilt brats speeding dangerously down our tiny roads...

For those of you who are wondering why the two different models, the answer is simple, the M4 Coupé is a two door model for those who choose style over practicality, while the M3 has four doors for those who want a similar racing driver experience, but also need to ferry the family about once in a while. Obviously you sit lower in the M4 Coupé to give you a more racing feel.

There's carbon fibre all around and the cars are obviously built to feel premium (for what they cost they better be!). It's not like any of us is ever going to own one, but we can dream, perhaps someday!

Price: M3 ₹1.198CR, M4 Coupé ₹1.218CR

Site: www.bmw.in

AC750

Wireless Dual Band Router

Archer C20i

- Simultaneous Dual Band :

802.11ac	5GHz	450Mbps
802.11n	2.4GHz	300Mbps

- Lag-Free Work and Entertainment :

5GHz



2.4GHz



- Easy USB Storage and Sharing :

(Storage sharing, media server, FTP server and print server)



- 3 Internal Antennas



Mimi MI-W2

An affordable but buggy smartwatch

Everyone and their uncle are making smartwatches now, and we received one from Hong Kong-based MIMI called the MI-W2. The design of the W2 is eerily similar to the Samsung Galaxy Gear smartwatch. It's made of an alloy material which seems sturdy. It connects to your Android smartphone (iOS devices are not supported) over Bluetooth. With a 1.54-inch display, the device has a battery-life of about 3 days, but strangely doesn't have any internal storage, or even any support for external storage. What you get is a screen, a mic and a rather loud speaker.

You can choose between digital and analog watch faces, and get a minimal interface to access various features of the device. You can use it to make or receive calls (receive with a shake; which was buggy when we tried it). There's an app for your smartphone, but you have to download the APK file from their site, not the Play store.

After you sync your address book to the device, you can search through all your contacts and make calls right from the watch, and it also packs a pedometer to calculate how far you've walked. You can control song playback, and this worked as expected. You can also use the watch as a secondary screen for your phone camera, and click photos using the smartwatch.



The MI-W2 is supposed to show notifications from your phone but most apps aren't integrated, so you just see which app sent the notification, not the notification itself. You can read and even compose text messages on the watch, but typing is a pain.

It's a good anti-theft solution, as an alarm is triggered when you move more than seven metres away from your phone. It can also be used to locate your phone. Currently, the company is working on bringing Facebook and Twitter notifications to the watch. It's available in three colours – silver, gold and gray.

Price: ₹3,400 (approx) | **Dimensions:** 9.3x1.5x0.4 inch
Display: 240x240 TFT | **Battery:** 360mAh | **Standby time:** 100 hours | **Weight:** 57g



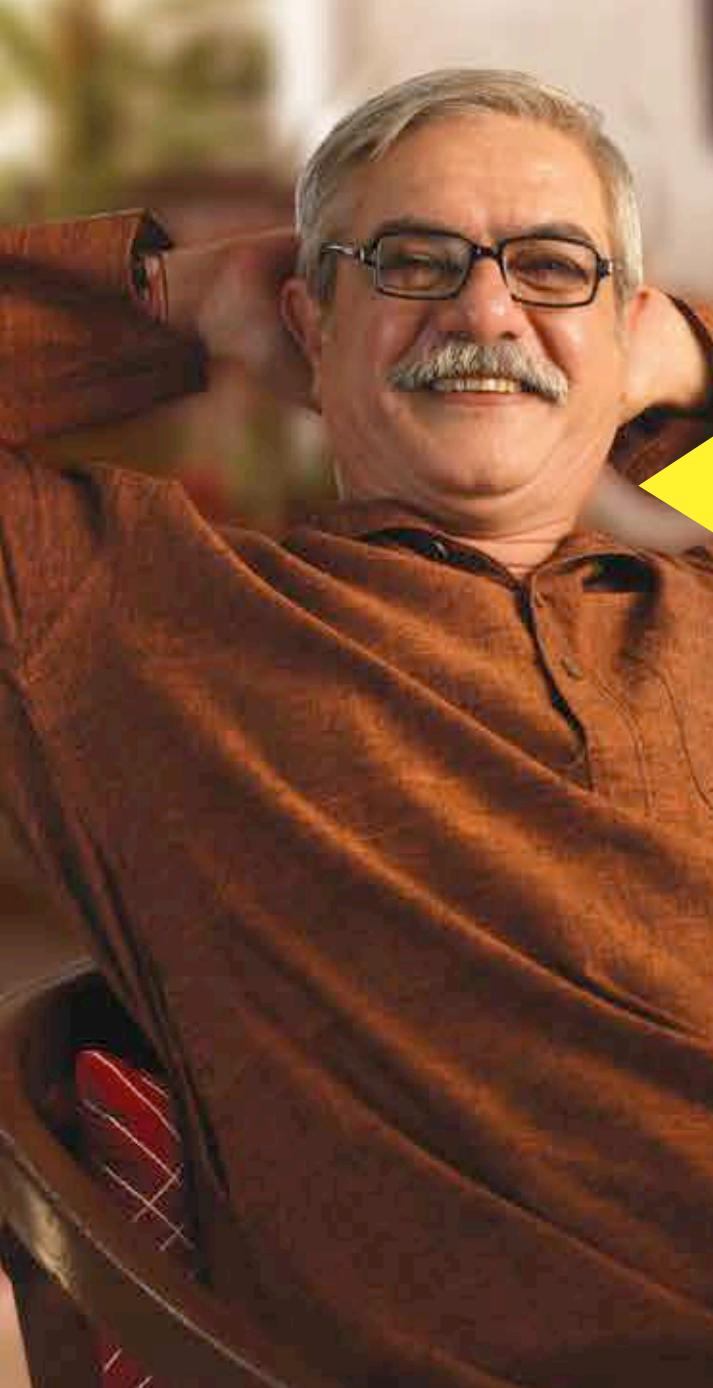
Zano

Taking the art of selfies to new heights, literally! Zano is a tiny quad-copter drone that is semi-autonomous, and has an HD camera. Although a must-have for any adventure sports fanatic, as the video on their site shows, this is also great to get some interesting angles for everyday photography as well. We have no doubt that some people will also find a way to use this to spy on people in cities, but oh well, this is the world we live in now.

The Nano doesn't just fly, it flies intelligently. It has a bunch of sensors that allow it to monitor its surroundings and avoid obvious obstacles. The same sensors also allow it to hover in place, and always know its location relative to you. Actually it doesn't know or recognise you the person, but it does tether with your smartphone (Android and iOS) over Wi-Fi, and knows where your phone is at all times. You control Zano from your smart phone.

SPECIFICATIONS

Size: 2.5-inch | **Weight:** 55 gm | **Connectivity:** Wi-Fi (b/g/n)
Camera: 5 mp with stabilisation | **Others:** RGB 8x8 pixel display; IR sensors; Continuous 15 minute flight time
Price: ₹14,000 (\$220)



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MB&F Horological Machine No. 6 - Space Pirate

Want a limited edition watch? Usually any of MB&F's watches will give you that feeling of exclusivity, but this one's a little rarer than rare. Inspired by some machine some guy saw in Japanese Manga, Horological Machine No. 6 - Space Pirate is either the weirdest, coolest or ugliest thing you've ever seen, but it guarantees that everyone walking by will stare at your wrist in awe.

Even if you've never heard of MB&F their designs are all one-of-a-kind (www.mbandf.com), but the HM6 surpasses all that have come before. There will only be 50 made, so it's a must-have for the rich and famous, as for us, we'll just ogle and increment the number of things we now know about but will never own (or maybe even see) by one more. Priced at somewhere over \$200,000 (₹1.2cr) this is wrist-candy like no other!



Roland Iten Calibre R822 "Predator" mechanical belt buckle

Here's a first; a belt buckle that costs \$400,000 or, about ₹2.5 crore! Why? This is considered mechanical jewelry – something that serves a purpose but is pretty as well! It's crafted in a way that makes it easy to use single-handedly – you know, to adjust your belt when you're driving about in your Bugatti Veyron after you've eaten too many caviar crackers! However, that's not why you pay 2.5 crores, it's the high-tech titanium body and the 387 diamonds that total to 14.15 carats. Then there's the fact that there will only ever be three of these made – exclusivity is probably worth at least 0.5 crore to the kind of people who buy these things.



TREWGrip

We've mentioned this one before, but they've improved things and are now showcasing at CES 2015. For those of you who missed our earlier story, TREWGrip is a revolutionary new way to add a keyboard to a phone or tablet. Why type with one finger or two thumbs when typing was designed for both hands? This is the logic that has driven the makers to make a product where you type on the underside. Basically, if you see the picture of a letter on the top, your fingers will be able to find the corresponding key below, plus there's a light that glows to give you the satisfaction of knowing you tapped the right key. Although seemingly fine for touch typists, we can't wait to get one to try out for ourselves to see how well two- or three-finger typing neanderthals like us do with it.

<http://www.trewgrip.com/>



Lamborghini Veneno Roadster

You want exclusivity? Getting a Lambo is usually a statement enough, but if you really want to go all out, get a rare Lamborghini! The company has built only 9 of these, so it's bound to be a rather exclusive club. Although the asking price of \$4.5 million seemed a little steep from Lamborghini, you are paying for exclusivity. In fact, you could probably make a profit! Apparently one is on sale for over \$6 million (before tax) or more than \$7 million with tax on a German site. The asking price of a (slightly) used Veneno is higher than Lamborghini's price? Crazy collectors!

Price: ₹30 to ₹42 CR (\$5 to \$7 million)

Site: www.lamborghini.com

Martin Logan Neolith

Electrostatic transducers with a thump

If you haven't heard of the term electrostatic transducer, you have now and will remember it thanks to Martin Logan. Their Neolith speakers are named after the Neolithic period of mankind, where apes finally became men by learning to use tools, etc. Basically, it was the defining period of humanity, and Martin Logan would have you believe their speakers are the defining moment in sound.

The Neolith supposedly creates a three-dimensional sonic soundstage like no other speaker before it. The huge 48-inch electrostatic transducers – a technology that vibrates a very thin membrane which is suspended between two oppositely charged layers. Think of an ultra-thin diaphragm that's lighter than the air it moves, yet is uniformly driven! Of course limitations occur and ultra low frequencies are a problem for such setups, which is why Martin Logan use both conventional woofers and mids along with what they call "curvilinear electrostatic transducers" to give improved sound output.

The Neolith has a 15-inch, rear-firing woofer, and a 12-inch mid-range driver, which overall allows the system to go as low as 23Hz



Now that you're convinced about the technological superiority of this set, you probably can't wait to get your hands on these beauties... all you need to do is write a cheque to the company for \$80,000 (₹51 lakh) for the cheapest pair and hire a plane to transport them to you...

Grey Design's Xhibitionist

The ultimate statement of success is always a yacht. No filthy-rich person is ever complete without one, and rightly so. Mansions, exotic cars and \$400,000 belt buckles can only get you so much attention. Plus, the ultra-wealthy sometimes need a luxury vehicle that

can get them into international waters and out of reach of the long arm of the laborious, land-lubbered law!

If you're going to run, you might as well do it in style, and something that looks like the batmobile of yachts is about as stylish as it gets! At 229 feet it's spacious enough to be a huge mansion on the seas, has a sun deck pool, a heli pad that appears out of nowhere when the deck retracts, massive cabins and even a garage to

house all those expensive cars so that you don't leave them behind on land. You want your Lamborghini Veneno with you when you dock at Monte Carlo, after all.

It's made to order, obviously, so contact the Swedish-based Grey Design, and they're sure to customise according to your specifications and also rush your order for a few million extra!

Price: ₹191 crore (give or take a few crores)



The Left Hand of Darkness

A classic award-winning novel by the science fiction author Ursula K. Le Guin. The book is set in the fictional Hainish universe where humanity is migrating, and is notably asexual in nature, at least in the beginning...



Think like a Freak



The guys behind *Freakonomics* are back, and they've become poster boys for challenging conventional

thinking. They're famous for trying to do away with emotional bias' and rely on data instead. They call this kind of thinking, thinking like a Freak. Just read the book, it's entertaining and eye-opening at times.

The Endless River

Pink Floyd have released an album after 20 years, and it's their last ever. *The Endless River* is a tribute to the late Richard Wright, and the music is reminiscent from *The Division Bell* times. Musical nirvana!



MOVIE

The Interview

What was all the hype about?

Just in case you've been living under a rock, with your fingers in your ears, screaming out loudly, non-stop, for the last month or so, and missed all that happened regarding this movie, well, go back under the rock, it's too tiresome to repeat again now.

Sony Pictures finally manned up and released this movie online, and in select theatres. Funnily iTunes refused to air it, for whatever reason, and that kind of irked me a little. I wonder what damning evidence the hackers had on Sony to make them think of scrapping a whole movie after it was made.

Anyway, coming back to the movie – if this wasn't a movie that was in the center of a free speech vs hackers vs dictator of a communist regime controversy – none of us would ever speak of it, and it wouldn't even appear here. It's bearable at best, and all the silly hackers succeeded in doing was making it even more popular than it was ever destined to be. From mediocre acting to a stupid storyline and not really witty comedy, this movie could have died a silent death and perhaps not made it to theatres in most places to begin with due to horrible



reviews. Now it goes down in history for reasons other than what you will watch...

Robert Sovereign-Smith

MOVIE

Predestination

Not as good as the Heinlein short story



I'm not going to put any spoilers because Sid hasn't seen the movie yet, and he has to proof this page. For those of you who have read the works of Robert A Heinlein a long time ago, as I have – as the movie plot unfolds in the first half-an-hour, you kind of get the feeling that you've seen it before. This is because the plot is changed up a little and some more layers have

been added – since the original Heinlein story was a short story, the script had to be beefed up, I guess. The acting and the effects are acceptable, but I felt there were too many hints as to what was going on, almost like it was dumbed down for the masses, which for me is ruining the Heinlein feel – read *All you Zombies* instead.

Robert Sovereign-Smith



Kolibree toothbrush

Regular toothbrushes are so old school! Just buy one brush and different heads for everyone, plus it uses apps to make brushing your teeth fun, for all ages, because, you know, we need to be entertained 24x7



Poyes Q1

When it comes to 3D printing pens, we've been disappointed because of the risks of getting burnt or passing out from fumes. It's refreshing to see this on Kickstarter as it promises cool-ink and forget risks, to us adults, it even promises to be child-friendly!



Horse-head squirrel feeder

Squirrels often steal seed and birdfood. Get back at them. It doesn't harm them, unless they're on Facebook, you tag them, and they're easily embarrassed! In our cities these are more likely to be big rats though! <http://dgit.in/1wOV1ns>



Saddleback Cay

You wouldn't happen to have 15.6 million dollars to blow up on some real estate would you? You could buy your own island off the coast of Miami in the Bahamas. It's a nice 47 acres, and has 7 white sand beaches, an airstrip and some of the best fishing spots in the world... a steal at ₹100 crore if you ask us!

<http://dgit.in/1xUiZn>



Aston Martin Luxury DB10

It's a car that will be seen in the next Bond movie titled "Spectre". Only 10 of them will be made, and there's no news of them being put up for sale even. You'd have to have a licence to kill to get your hands on this car, and something tells us it's worth killing for!

<http://dgit.in/t2kill>

MOVIE

Autómata

Watching this is a prime directive



Automata manages to create a believable and almost realistic picture of a bleak post apocalyptic world. It seems realistic because you have on one side starvation and an inhospitable environment, and on the other a high technology world where holograms, LED painted derelict skyscrapers and even Robots are commonplace. If at all we devolve into a survivalist society most of us at Digit would imagine such a scenario and the juxtaposition these realities to

be quite natural.

The story of Automata itself is quite compelling and we'll try to tell you as much as we can without revealing any unintentional spoilers. Antonio Banderas stars as an insurance claims investigator who stumbles onto a few curious cases of robots violating their primary protocols against altering themselves.

Unlike the Asimov's Robots these Robots only have 2 laws. They can't alter themselves and they can't harm humans. The film focuses on the alteration aspects and presents an interesting take on evolution. It does however fall short of believable in its plot and tries to pander to a broader audience, in doing so diluting what it seemed to have started off into. Should you watch it? Yes definitely. Depending on how exposed you are to this science fiction trope you'll either go "oh man why'd they have to go that way?" or "wow that was mind blowing".

Siddharth Parwatay

Adventure is out there!

Yes the headline is from one of our favourite movies, Up, but we really mean it. Adventure is literally out there if you happen to live close to Maharashtra. Actually, it doesn't matter where you live if you're willing to travel and spend money on an adventure holiday.

Della Adventure is located near Lonavala, which is a hill station near Mumbai. It's a popular retreat for large corporate companies, but is also popular amongst families.

In this day and age where most of us are couch potatoes, have jobs that involve a lot of sitting and then even choose to go on holidays that involve a lot of relaxation, it makes sense for a few of us to try something radically different than the usual geek lifestyle... With a really diverse and comprehensive list of activities it's a place you won't get bored no matter who you are – bungee jumping, paintball, R/C planes and cars, flight simulators, pool, golf, foosball, archery, ATV rides, Land / Water Zorbing, horse riding, Cricket, rock climbing, table tennis, dog walking (yes, just relaxing while walking a dog, and you don't even need to bring the dog!), cow milking (we're serious!), Chess, carrom, darts, dirt biking, and more...

If you can't find something to do at this place, you have a serious problem! Plus it's not all action-packed adventure (except the Chess and dog walking), as you get cozy rooms and internet access to get back to your geekdom whenever you want.

There's also body art, massages, Yoga, cooking classes and even a treasure hunt for those not into adrenaline rushes. Just log on to www.dellaadventure.com and check out the various packages they have on offer. We've been planning on going there for some time, hopefully after issue closing.



Mobile watch

Here's how you can win at all things mobile, including Google Ara, Aakash 4 and BlackBerry Classic

Security watch

Win at security by paying attention to our security watch section. This month, password stealing from Android

WIN AT Apps

Last month belonged to Microsoft and Google as the two heavyweights launched new apps and updated old, popular ones.

Sway: Microsoft's online Office tool now available for all

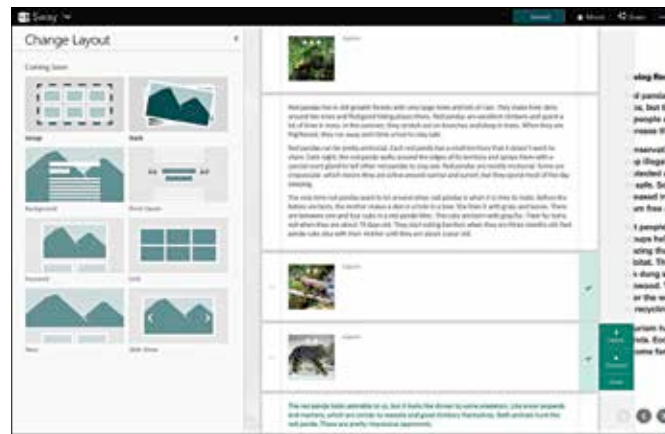
Microsoft has launched its Office online tool 'Sway' for everyone with a Microsoft account. The company has also added some new features including easier text editing features to the preview.

Microsoft stated that just 10 weeks since the debut Sway has received over 1 million unique visitors and over 175,000 requests to join. The company stated that the numbers have grown "by thousands" every day since the launch, so it has decided to remove the waitlist.

Microsoft stated in a blog post: "It's been only 10 weeks since we kicked off Sway Preview, and we've already had over one million unique visitors to Sway.com and over 175,000 requests to join, and those numbers grow by thousands daily."

The update has also added some improvements to the app such as undo and redo buttons, easier text editing, improvements to Color Picker and the ability to import text and photos from PDF files.

Microsoft has also made the iPhone app available in Australia as well as New Zealand. The app has received



Office Online from Microsoft

an update that allows users to create Sways offline, along with improved cross platform support as well as support for the iPhone 6 and 6 Plus.

Last Month, Microsoft made its Office suite free for iPhone, iPad and Android OS. The move allows users who haven't subscribed to Office 365, to create and edit documents in

Excel, Word and Powerpoint for free. The company has launched the free version of Office for iPhone and iPad and a preview version for Android for now, with the full release expected in 2015.

Google brings museum display exhibits to mobile users

Google is making its platform available for museums to help them showcase their exhibits to smartphone users. Museums will be able to use YouTube and Street View to showcase their exhibits to anyone with a smartphone.

Google Cultural Institute has partnered with museums worldwide for the project. 11

museums and cultural institutions have participated in this pilot project to date and their apps are now live on Google Play.

Some of the early adopters of this new software platform are museums and institutions in France, Italy, Netherlands and Nigeria, including the Museum of Arts et Métiers, Musée Curie, Museum of Le Havre and Rijksmuseum van Oudheden to name a few.

Museums will be able to use Google's "indoor" Street View technology to offer 360 degree tours through their apps. The apps will show exhibit photos and audio tours, and will come with social-sharing features that let visitors post what they're viewing in a museum on Facebook, Google+ as well as via email with their friends. The apps are also available offline for users who are travelling abroad and don't have an internet connection.

Google Cultural Institute has earlier digitised the Dead Sea Scrolls, Art Project to bring museums online and have documented the World Wonders in Street View and 3D. Last year Google launched a 360 degree online view of Indian monuments in partnership with Archaeological Survey





Misleading reviews

Owing to misleading reviews by users, Google is now banning developers from using user testimonials in their app reviews <http://dgit.in/GoogleBan>



Snow in Dubai

Dubai might be the last place on earth you find snow, but a company is planning on simulating snowfall on the streets <http://dgit.in/DubaiSnow>

App Watch



The Google Cultural institute

of India. The project aims to create panoramic imagery of "nationally important" monuments including the Taj Mahal, Humayun's Tomb, Khajuraho, Qutub Minar, Red Fort and Agra Fort, etc.

YouTube Offline launched in India

YouTube has launched the offline feature that allows users to download videos to their Android or iOS device for later consumption without internet connectivity.

Google stated that users will have to sync with YouTube to watch the videos. The downloaded content will be available for offline playback only through the YouTube app, and can be downloaded via Wi-Fi connectivity or mobile data. The videos will be available for viewing for 48 hours only, to help avoid issues involved

with free downloading of copyrighted content, the company stated at the launch. YouTube stated that, "much of India's popular YouTube content" is available to view offline.

John Harding, Vice President of Engineering at YouTube, said of the new offline feature, "In a country like India, the future of the Internet is mobile... By launching this offline experience on YouTube in India today, we hope to help people move past the challenges of data connection, speed and cost to enjoy a smooth, buffer-free version of YouTube."

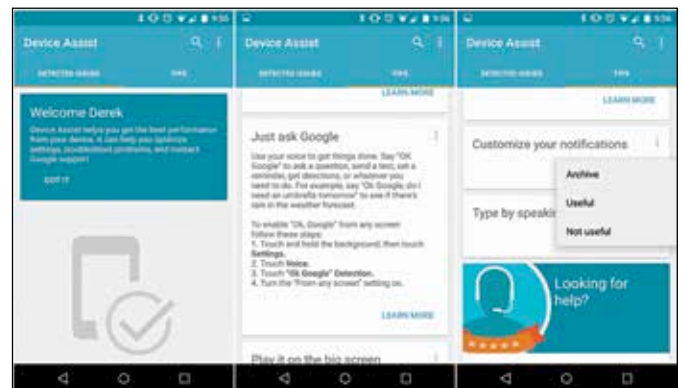
Speaking about how content partners will benefit, Ajay Vidyasagar, Regional Director of YouTube Partnerships, YouTube Asia-Pacific, said, "The new feature will also help our partners bring more viewers to their content

and find even greater success on our platform."

Google had announced YouTube's offline feature along with the Android One devices earlier this year. The new feature will be useful in India which has the slowest internet speed in Asia, poor 3G connectivity and expensive data plans. YouTube has over 10,000 Indian films and over 250,000 Indian songs. According to a recent report, Indians watch nearly 5 billion videos on YouTube every month and the country is

changing the screen brightness setting to save battery, or to charge from a power outlet rather than from a USB port for faster charging. It also includes a button to contact Google support team for complicated issues and reminds users to share device information with Google for improved technical support.

Google Play listing says that Device Assist app will give users get proactive help with detected issues including GPS, connectivity, and battery among others. It also includes



Device Assist from Google

expected to become the second largest market in the world, for video content, by 2015.

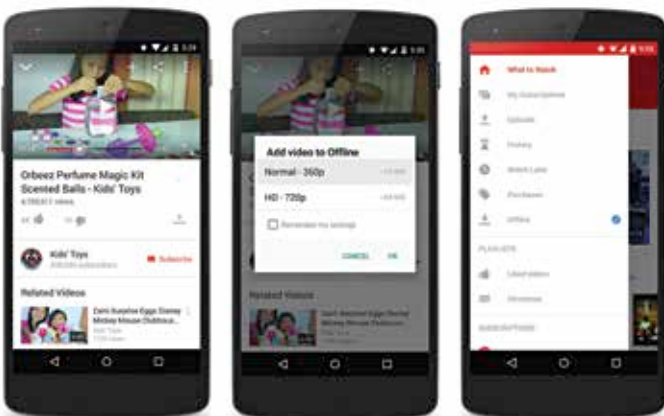
Google launches Device Assist for Nexus, GPE and Android One devices

Google has launched a new troubleshooting app called Device Assist for Nexus, Google Play edition (GPE), and Android One devices running Android 5.0 Lollipop. The Device Assist app is currently limited to US-based devices and can be downloaded from the Google Play Store.

Google says that the new app provides "tips and proactive troubleshooting" when it detects issues on a device. The app will offer suggestions like

some tips to explore new features and improve the performance of device as well as easy access to live Google support for Nexus and Google Play edition devices.

The device assist app could also be a way from Google to track any further issues with its Android 5.0 Lollipop. The internet giant has already faced complaints of WiFi issues, battery bug and more in its latest OS. Google is announced a new update for Android 5.0, dubbed Android 5.0.1 to the Android Open Source Project (AOSP) with the build number LRX22C. This initial update will most likely be for fixing bugs and issues reported by users in the last few weeks.



Watch YouTube videos offline



Longer electric cars

A startup has come up with a new solid state battery that could store double the energy than conventional ones <http://dgit.in/LongerBatt>



Minecraft Mansion

Minecraft has some amazing structures, and someone recreated Minecraft creator Notch's mansion too <http://dgit.in/MinecrafterHome>

WIN AT Mobiles

Be ahead of the crowd when it comes to the knowing of all the happenings in the mobile world

WhatsApp to get voice calling soon: Reports

Earlier this year, messaging service WhatsApp had announced that it will roll out voice calling



Voice calling is coming

feature for its users. According to new images leaked online, the feature is expected to be launched soon.

Androidworld.nl has published alleged screenshots of a build of the WhatsApp app that offers voice calling. According to rumors, the test build is being used by WhatsApp employees, and we will soon see an official build as soon as the company is satisfied with the results.

The screenshots show separate screens for dialing a voice call to WhatsApp contacts, call logs and ongoing calls. Another interesting feature leaked in the images shows call recording and playback. However, it is difficult to verify the authenticity of the screenshots and WhatsApp has not confirmed that it's testing such a feature.

In September voice calling feature was spotted on WhatsApp's iOS app in the update released for iPhone on September 8, which added several new features including improved location sharing and faster camera access. Users who have updated to the new WhatsApp iOS app are getting a new pop-up message, which reads, "WhatsApp requires microphone access to send Voice Messages, record Videos with sound, make and receive Voice Calls."

WhatsApp CEO Jan Kuom had announced the voice calling



Google Ara: a modular cell phone

feature in February, post the company's Facebook acquisition. India which has over 70 million WhatsApp users, will benefit from the voice calling feature as WhatsApp executives in the past have stated that the popular messaging app will always remain free in the country. The feature will be inline with other messaging app like Line, BBM, Skype and Viber which already offer free voice calling. Android, iOS and Windows Phone also offer free voice calling through internet via Hangouts, FaceTime and Skype.

Google confirms Project Ara circuit design and chipsets

The form factor and chipsets for Google's Project Ara modular smartphones have been

confirmed. The company's Advanced Technology and Projects (ATAP) team stated on its Google+ page that it is working on the SoC designs in collaboration with NVIDIA and Marvell. Reference designs for the Ara phone modules are under development and have been based on the Tegra K1 chipset from Nvidia and PXA1928 chipset from Marvell. The chipsets are expected to become the reference chips in the MDK v0.20 release.

The ATAP team had earlier shared an image of the Spiral 2 circuit board to be used in the Ara phone. Eremenko's post though indicates that the team has come up with an all new version of this circuit board, in the Spiral 3 model. Eremenko had also talked about the presence





Gr After Si

Germanium could be replacing Silicon in the being the next great chip material
<http://dgit.in/GerChip>



Amazon Prime Now

Amazon wants to totally take over the delivery system, announces one-hour delivery in NYC
<http://dgit.in/PrimeNow>

Mobile watch

of a Pulse Oximeter at an Engadget conference recently.

Google is hosting Ara developer conferences in various locations in January 2015. The India leg of this is scheduled for January 21, to be held in Bengaluru.

Indian government to review specs of Aakash 4

The Indian government is planning to review the technical specifications of the Aakash 4 tablet. According to reports, the Department of Electronics and IT (DEITY) told a Parliamentary committee that vendors couldn't meet specifications desired as per the tender such as 3G modem, Java support etc.

"HRD ministry started this project. The initial mistake that was committed by us was that we fixed the price and asked the manufacturers to supply the product on this fixed price. If we could have decided the specifications and then asked the manufacturers to supply the product that could be the better arrangement," DEITY Secretary informed the Standing Committee on Information Technology.

The official revealed that the government is now planning to review technical specifications of the Aakash 4.

The Aakash 4 tablet project was initiated by ex telecom min-



The Ubiplate 7

ister Kapil Sibal with an objective to bridge the digital divide in the country. The Aakash tablet, however, was marred with controversies, right from the price point, manufacturing and availability. The project was completed after DataWind shipped the first and second versions of the device for ₹2,276 and ₹2,263 per unit.

Our OS is different from Micromax's Yu, OnePlus tells court

Shenzhen OnePlus Technology Co. Ltd has told the Delhi High Court that the operating system being offered on its OnePlus One phone is different a version of Cyanogen from the one Micromax had secured an exclusive licence from Cyanogen.

OnePlus added that its phones featured CM11S version of the Cyanogen software while Micromax offered a different

version. The company also the agreement between Micromax and Cyanogen implied that Cyanogen cannot collaborate with other smartphone makers in the country.

The company also sought three months of time to clear its stock as well as come up with a new software to replace Cyanogen. According to reports, the court observed that Cyanogen wasn't fair with OnePlus and Micromax.



OnePlus is different!

The latest development comes after OnePlus was temporarily banned from marketing, selling and shipping of its smartphones in India. The directive came after Micromax sought an injunction against OnePlus for allegedly infringing upon exclusive rights it had acquired with Cyanogen. Micromax recently launched its Cyanogen based Yu Yureka smartphone in India.

OnePlus- Micromax-Cyanogen tussle comes amid Xiaomi and Ericsson entered in a legal battle over patent issues. Ericsson claimed the Chinese company had infringing upon its patent.

Google expands Android One program to Bangladesh, Sri Lanka and Nepal

Google has announced that it will launch its Android One smartphones in Nepal, Bangladesh and Sri Lanka in the coming weeks. The Internet giant plans to make the smartphones accessible to an estimated 200 million people with the launch.

Google has stated that Micromax, Karbonn and Spice which launched its Android One smartphones in India will be launching their devices along with Bangladesh-based Symphony in the Bangladesh, Nepal



**It's too late to cry
over broken smartphone glass.**

Dragontrail™ from Asahi Glass in Japan.
Don't pick a smartphone without it.

dragontrail.agc.com

AGC
ASAHI GLASS



The egg comes first

A startup called Hampton Creek is using natural plant protein to rebuild the chicken egg
<http://dgit.in/SimEggs>



3D printed yearbook

3D printed yearbook gives blind students an opportunity to remember the faces of their classmates
<http://dgit.in/3DprintBook>



Android One smartphones

and Sri Lanka. In Bangladesh, Google has tied up with operator BanglaLink to start selling the Android One devices. Bangladesh based brand Symphony is also planning to launch their Symphony Road A50 smartphone in the coming weeks.

Google's VP for Product Management, Caesar Sengupta said, "In the coming weeks, the Android One devices will start to go on sale in India's neighboring countries of Bangladesh, Nepal, and Sri Lanka."

Last week Spice has launched the Dream Uno H, which is targeted towards the Hindi speaking population in the country. The smartphone has an entire suite of Google apps in Hindi. Karbonn Mobiles has also committed to a long-term partnership with Android One in India and stated that its next generation Android One smartphone will arrive in Q1 2015.

Google had unveiled the Android One programme in June this year. The internet giant stated that the new phones will "give people a high quality mobile experience for an affordable price, running stock-Android with updates from Google." Apart from Bangladesh, Sri Lanka and Nepal, Google is planning

to further expand the programme to Pakistan, Indonesia, and the Philippines. However Google's Android One devices have not seen a great response in India with many local retailers refusing to stock the devices due to the low profit margin and demand for them.

Leaked Sony tablet boasts insane specs

Leaked specs of what is claimed to be the Xperia Z4 Ultra suggest that the upcoming Sony tablet will be the most powerful mobile device ever launched. The leaked specs are so unbelievable that we literally cannot believe them, especially since we don't know where PadNews, the blog that leaked the specs, got the source image from.

As you can see, those specs make the Xperia Z4 Ultra tablet the single most powerful tablet to ever be launched. Now, while Sony has a reputation of packing its devices with quality, powerful hardware, the above specs do seem out of this world.

On the other hand, if Sony can actually deliver an Android tablet with a 13-in 4K IPS display, a 64-bit octa-core processor,

6(!)GB of RAM and a 12,100(!) mAh battery, then it's all set to rule 2015, that's for sure.

Android Auto to come pre-installed in cars next year

Google plans to directly integrate its services in your car instead of via your Android powered phone. If and when this happens Google will be able to make use of information coming from your fuel gauge, rear view cameras, sensors, GPS, etc.

According to Reuters, the source close to Google did not provide any timeframe on

dubbed as Android M, in the next year or so.

This year we saw both Android and its arch rival Apple launch their versions of smartphone and auto integration and both initiatives are backed up by car manufacturers. Both Android Auto and Apple's Car Play are aimed at giving you more information about your car and your trips. And if Google's auto integration goes as planned and the smartphone goes out of the picture, Google will be able to integrate its services more tightly around you.



Android Auto for smarter cars

when Android Auto will be integrated into cars but mentioned that it is in the works. It was also revealed that Google is planning to come out with the next version of Android,

BlackBerry Classic QWERTY smartphone officially unveiled

BlackBerry has officially unveiled its Classic smartphone featuring full QWERTY keyboard, physical navigation keys and design language of the BlackBerry Bold 9900. The smartphone is available through Amazon.com and www.BlackBerry.com for \$449 in the U.S. and \$499 in Canada.

The BlackBerry Classic runs BlackBerry OS 10.3.1 and is powered by a 1.5 GHz Qualcomm Snapdragon processor along with 2GB of RAM. The BlackBerry Classic has a 3.5-inch touch display, 294 dpi HD



Xperia Z4 Ultra



Double the solar

French chip manufacturing company Soitec produces solar cells with double the conventional efficiency <http://dgit.in/BetterSolCells>



Next-gen camera

LG and Mercedes are jointly working on next-generation camera systems to power future cars <http://dgit.in/LGMercSys>

Mobile watch



The BlackBerry Classic

resolution and Corning Gorilla Glass 3 protection.

It comes with an 8MP rear facing camera and 2MP front facing camera. It has 16GB of device storage (expandable by up to another 128GB via Micro SD card).

Other important features of the Classic include BlackBerry Blend, digital assistant BlackBerry Assistant, dual app store-fronts – BlackBerry World and Amazon Appstore, and BlackBerry Hub.

“We listened closely to our customers’ feedback to ensure we are delivering the technologies to power them through their day – and that feedback led directly to the development of BlackBerry Classic. BlackBerry Classic is the powerful communications tool that many BlackBerry Bold and Curve users have been waiting for. It’s the secure device that feels familiar in their hands, with the added performance and agility they need to be

competitive in today’s busy world,” says John Chen, Executive Chairman and CEO at BlackBerry.

BlackBerry has been making a lot of efforts to make a comeback in the smartphone segment, currently dominated by the likes of Google’s Android and Samsung. The recent BlackBerry Passport, the square QWERTY smartphone, helped BlackBerry gained some attention.

Right now there’s no word on the availability of the smart-

phone in India. But, we expect to be available early next year.

Spice launches first Hindi Android One smartphone at ₹6,499

Homegrown smartphone maker Spice has launched the first Hindi Android One smartphone. The device, Spice Dream Uno H, is the first smartphone to feature a complete Hindi keyboard, voice input along with Hindi versions of Android and popular Google products such as Chrome, Search, YouTube and Google Maps.

The device has a 4.5 inch IPS display along with a 1.3 GHz quad-core processor and Android 4.4.4 KitKat. It also has a 1700 mAh Li-Polymer battery and expandable storage of up to 32 GB. It is priced at ₹6,499 and offers 2G and 3G connectivity options. The device also has a 5 MP rear camera along with a 2 MP front camera.

Spice, along with Micromax and Karbonn, was the first of three manufacturers to join

Google’s Android One program. The company launched the Spice Dream Uno, which was its first Android One device. The Micromax Canvas A1 and Karbonn Sparkle V are the two other Android One smartphones available in the market right now.

Instead of going with the online model, Spice has opted



Android one

to sell the Dream Uno H in all major retail stores in the country. This makes sense, as the phone seems to be aimed at the tier II and tier III cities in India, which aren’t big on buying online yet. **1**



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3D printing is working wonders in almost every field and now helping a dog run again <http://dgit.in/3DPntLimb>



NaNoGenMo Writing

National Novel Generation Month is an event where computer programs that generate novels will be written <http://dgit.in/NaNoGenMo>

WIN AT Security

There's been an increase in cyber attacks recently, and this is going to increase in 2015, plus Android is under threat as well

Cyberattacks to increase in 2015

Security researchers predict that there will be an increase in cyber warfare and espionage, with cybercriminals coming up with new strategies to hide their tracks and steal sensitive data.

McAfee Labs' 2015 Threats Predictions report claims that "Cyber espionage attacks will continue to increase in frequency," the report said. "Long-term players will become stealthier information gatherers, while newcomers will look for ways to steal money and disrupt their adversaries."

The report comes after the news of large-scale cyberattacks this year linked to Russia or China, as well as the infiltration of Sony Pictures by cybercriminals.

Trend Micro Incorporated has also released its annual security predictions report, "Trend Micro Security Predictions for 2015 and Beyond: The Invisible Becomes Visible".

According to that report, targeted attacks campaigns will continue to multiply in 2015, after cybercriminals had noteworthy breaches via targeted attacks in the US and China.

"What we are seeing today is not a huge surprise but rather the velocity and brutal measures cybercriminals are using to steal information," said, Dhanya



Thakkar, Managing Director, India & SEA, Trend Micro. "Following the success of targeted attacks from Chinese and Russian cybercriminals, many hackers from other countries will regard cyber-attacks as a more practical method to grab a foothold in an organisation. Additionally, with the incessant barrage of data breaches emerging almost daily, it's reasonable to presume that data breaches will be essentially regarded as a common offshoot

of the present threat landscape." Threats around banking will continue to become more severe, and banking intuitions must implement two-factor authentication for online services.

"The payment ecosystem will continue to evolve," said JD Sherry, vice president of technology and solutions, Trend Micro.

New Password stealing virus hits Android devices

Cybersecurity sleuths have issued a warning about a new infectious Trojan virus which steals vital information from your Android based smartphone and can even illegally send SMSes to those on the mobile contact list.

The malware dubbed 'AndroidSmsSend' can acquire as many as four aliases to steal passwords. "Android/SmsSend is a premium service abuser

family malware that arrives bundled with legitimate Android applications and infects Android based smart phones.

"Once infected, it sends text messages (typically with a link to itself or a different threat) to a specific number, typically to numbers on the contact list and is also capable to send SMS to premium rate numbers," the Computer Emergency Response Team of India (CERT-In) said in its latest advisory to Android phone users.

The advisory says that after infecting a device, the malware steals the Smartphones IMEI number, device id, device type as well as other basic information and can even install spyware on the targeted device.

CERT-in also warns that the virus "steals contacts and pictures, tracks the location, steals passwords, illegally accesses text messages, crashes a complete system, steals personal banking information when logged in, installs other sort of spyware and disables firewall and anti-virus program to defend itself."

Be careful when downloading apps, and when clicking links when surfing from your phone. Always check the permissions that apps ask for, and try and encrypt your data if your OS supports it.





Xbox One VR

Apparently the development of the Xbox One VR headset is complete and has reach a few developers too <http://dgit.in/VRXbox>



IBM curing Ebola

IBM wants to cure Ebola by using your Android device, doing work on it when it's idle. <http://dgit.in/IBMEbola>

Security watch

Spam from messaging apps on the rise

Even though unsolicited phone calls and texts from telemarketers are on the decline, spam from internet and messaging apps like WhatsApp is on the rise, say industry experts.

Minister for Communications and Information Technology Ravi Shankar Prasad stated in the Rajya Sabha that the number of complaints lodged by consumers on the Telecom Regulatory Authority of India's (TRAI) portal has now begun to decline.

The minister added that the Indian government has fined service operators who failed to take action to the tune of ₹7.13 crore, blacklisted 19 telemarketers permanently and blacklisted another 2.4 lakh for two years, in an effort to curb spam.

However, industry experts state that these steps may not be enough as the government's regulation that curbed spam calls and texts does not apply to messaging apps like WhatsApp.

"Spam sent over WhatsApp, Internet-based spam



calls and spam messages — the current regulations do not cover it, and this is a major new front for unsolicited calls and messages," stated Rajan Mathews, Director-General of the Cellular Operators Association of India.

Norton's Jeans

Norton has developed a pair of jeans and a blazer with RFID blocking technology that will prevent thieves from stealing information from passports and contactless credit cards.

Security Software maker Norton has teamed up with San Francisco-based Betabrand to make the READY Active Jeans and Work-It Blaze with radio frequency identification (RFID)-blocking fabrics in the pockets. The pants include two protected pockets, one in front and one in the back, while the blazer has just one pocket.

According to the crowd funding page, Norton and Beta-Brand claim "that more than 10 million identities are digitally pick pocketed every year" and "70% of all credit cards will be vulnerable to such attacks" by 2015.

Betabrand CEO and founder Chris Lindland stated that the two companies started working together in October to develop the design and the silver-based material to block signals. The products were developed by Betabrand's "think-tank," where early backers get a discount on the products that end up in production.

The RFID jeans have already surpassed the funding goal and the company plans to ship them in February. However the Blazer will be launched only in mid-March 2015 if it reaches its funding goal. The jeans are a modified version of a popular one that the company already makes but are priced \$20 more at \$151 for the added materials. Once the promotion is over the jeans will retail at \$168. The blazer is priced at \$198 but is currently available at a 30 percent discount. **1**

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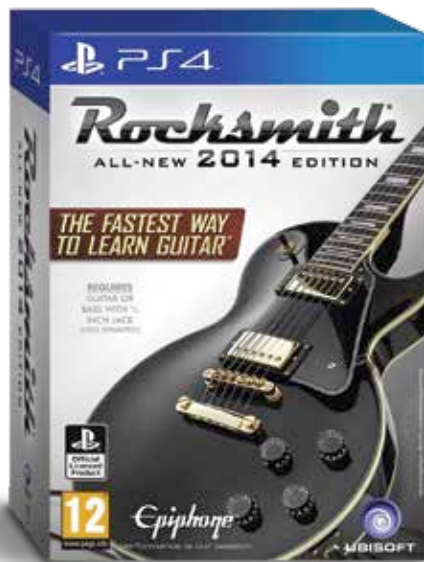
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Geek life

7 things you didn't know your smartphone could do. Plus a bonus round with radical accessories

Win at upping your mind power

Productivity and other usage aside, technology today can help you sharpen your mind. Use these tools to get sharp and get smart.



Rocksmith 2014

Who says New Year's Resolutions have to be all about losing weight or getting in shape? Why can't they be about combining how to play the guitar into an interactive video game, for instance? That's what Rocksmith 2014 is all about. We've tried it out in our office and think it justifies its claim with great aplomb. With a variety of popular songs to strum your guitar to, this game really gets it right better than most other games in its genre. If you're up for learning how to play a guitar in the new year, we highly recommend you grab hold of a copy of this game -- it will make the whole process a lot faster and fun-filled.

Gadgets to drool over your New Year's Resolution

Kindle Paperwhite

Admit it. You're not able to find the time to read for pleasure as you once used to. And buying books can either be too expensive or costly to the environment. What does one do to rekindle the love for reading in oneself? Get yourself a Kindle Paperwhite. No, seriously. It's quite cheap, can store over a 1000 ebooks, and lets you read in the dark. What's more, its surface feels just like paper -- textured and non-smooth. A sleek, compact device to replace your physical books library. Yeah, that's pretty much it. A great start to the new year, if we may say so. What's better than getting back to reading, right?



Win at living healthy

Here are some tips on the best apps, hardware and practices to make you fitter.



Low price smartphone

Targeting the consumers who want a smartphone in an inexpensive budget, Cheers Devices in India launched the Dual-SIM Cheers C-21 phone, running Android ICS, for only 1,999/-

Drool maal

Acer Chromebook C720

Tired of using Windows? Think Mac OS X just can't cut it for you? Bored being on Linux for too long? If you answered yes to anyone of those questions, it's time to take the leap to a whole new cloud computing environment – Google's Chrome OS. The Acer C720, an 11-inch Chromebook (laptop) with 2GB RAM, 16GB SSD, and all the functional ports and communication options is a great alternative platform-based computer to buy at its price. It's more than equipped to handle everything you throw at it and its OS. So, are you ready to make the switch to an OS that's 99 percent similar to working on a Chrome browser? Something to think about this new year's eh?



Goqii

We never said don't pay attention to your health this new year. How could we? We know very well that health-related resolutions are the most popular ones in January every year – they're often the most broken resolutions. But with Goqii's smartband, a personal tracker extraordinaire combine with a in-built fitness coach that can be tailored to your preferences, getting in shape (and staying in shape) are no longer a chore. And it isn't terribly expensive, compared to opposing smartbands. Just check it out.

Fujifilm X30

If you aren't a photographer, it's time to pick up this creatively rewarding hobby this new year. Resolve to become better at the art of taking photos, and the way to do that is not with your smartphone camera – oh no siree. Take a look at the Fuji X30, which sits at the crossroads of a professional and point-n-shoot camera. Not only is it incredibly light, but it packs quite a punch with its specs. Given Fujifilm's track record, we have no doubt the X30 (part of its X Series) is a good performer at its price. You know how it is with new year's resolutions: being a good photographer is all about buying the right camera, and vice versa. Go get shutterbugged!





Ur/Web development

A researcher at MIT has unified web development into a single speedy language called **Ur/Web** <http://dgit.in/UrWeb>

The joys of SNES

Read this short and sweet christmas comic by Julia Wertz on the Super Nintendo console from her childhood. http://dgit.in/SNES_FTW

7 things

you didn't know your smartphone could do



Your phone can do much more than just keep you connected or play lol cat videos. It can start a fire. Literally. Read on to find out more.

Ryan Valles
readersletters@dgit.in

These days, the one thing we can't live without, is our smartphones. We have them with us all the time. They have become an integral part of our lives. We use them constantly. But did you know that you could...

1 Tune your Guitar Using your smartphone

Using your smartphone you can tune your guitar or any other stringed instrument. The smartphone detects the sound of the string you are playing and displays on screen if you need to sharpen or flatten that string to get the desired note.



Never miss a note

Check out DaTuner (lite) dgit.in/datunerl. This app displays the nearest note and the octave as well as the error in cents. It is very easy to use and extremely accurate.

2 Remotely take a picture with another smartphone

With the RemoteShot app (dgit.in/rmtsht) you can remotely click a picture with an android device using another android device. The app needs to be installed on both the devices. Pairing is done through Bluetooth.

Once the app is started you choose which device will be the remote and which device will be the camera.

There is a viewfinder on the remote device that lets you frame the shot.



You can take a picture remotely. If only you had such pretty friends.

Perfect for using it as a remote trigger when taking group pictures and you don't have one of those long selfie sticks.

3 Your smartphone can be used to check if your TV remote is working properly

Often you find that one of the many remotes in your house isn't working. You tap it to try to get it to work, next you proceed to pointing it from all possible angles, and eventually get frustrated and open up the back panel to change the batteries. However, before doing any of that there is a simple way to check



Look at it through your smartphone's camera.

Once you click the shutter button on the remote device an image is captured on the device acting as the camera.

The remote device can switch between the main camera and the front facing camera, set a timer interval, turn the flash on or off as well as take pictures with burst mode.

if the remote is still transmitting a signal. Just start up your default camera app, point the remote to your smartphone lens and voila! If your remote is working, you'll be able to see a purplish light emanating from the remote's IR bulb when looking through your camera. The reason is that while your eyes can't see in infra red, your camera can.

4 Snap pictures of Sheet music and have your phone play it back to you

With iSeeNotes - Sheet Music OCR (dgit.in/staffocr) you can click a picture of your sheet music and have your cell



Mozart anyone?

phone play it back for you. This app reads multiple staves, recognizes the bass and treble clefs etc and give you a surprisingly

accurate playback of the sheet music.

Though it has its limitations it will not be long till reading sheet music and playing it back with a smartphone is a reality. For now though it's just a proof of concept and we wouldn't recommend spending the ₹250 asking price.

5 Forecast the weather (not just tell you the weather stats)

The good people at OpenSignal stumbled on something very interesting: the sensors in Android phones used to measure light, pressure, battery temperature etc can also be used to work to report the weather.

Using enough smartphone sensors experts can use the data gathered to accurately forecast the weather. You can be part of the program by installing the Crowdsourced Weather Map app. Mind



Print it quick!

PrintSnap, a new self-contained instant camera can print pictures on cash-register receipts. Polaroid watch out! <http://dgit.in/PrintSnap>

Geek life

BONUS ROUND: RADICAL ACCESSORIES FOR THE WIN!

Use your smartphone as a rifle sight

Did you know your smartphone could be used as a rifle sight to help you improve your aim and shooting around corners? With this accessory called Inteliscope you can even view thermal imaging for hunting in the night.



Bluetooth on your smartphone. The device works in depths from 0.5 meters to 40 meters (130 feet).

Measure your alcohol levels

If you are at a party with your friends and you have had a few drinks, you are probably feeling alright to drive but would like to make sure. With the Bluetooth BACtrack Vio Smartphone Breathalyzer you can get this information in just 5 seconds. This compact keychain acts as a breathalyzer, wirelessly sending your BAC reading to your IOS or Android smartphone.



Catch Fish using your smartphone



With the Deeper Smart Fishfinder sonar device you can get information about the pond bed, the fish and even the water temperature via



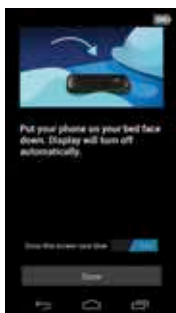
You'll do your bit weather you like it or not

you this is different from using something like Accu-Weather which merely reports the weather; the Mobile Weather Station app at least

in theory is supposed to use analytics to predict patterns and your smartphone helps it in doing so.

6 Help you sleep better

Yes you read that right. As addictive and distracting as smartphones are, if you choose to, they can help you get a good night's sleep too. Smartphones, with their amazing capabilities, make it hard for us to put them down. We are constantly looking at the screen while messaging, editing photos, browsing the internet, checking our email or even creating lists and tasks.



Sleep better despite your phone being next to you

This confuses the brain as to the time of the day and makes it hard to fall asleep. Add to this the constant buzzing of the phone with incoming

messages and notifications disturb you throughout the night.

Using the Sleep Time app (dgit.in/morezzzzz) you can use your smartphone to get a good night's sleep.

This app detects your movements through the night and figures out your sleep pattern. All you have to do is place the phone on your mattress before you go to sleep and the app does the rest.

The apps alarm wakes you up at the lightest part of your sleep cycle. You can avoid waking up groggy with the urge to hit that snooze button.

7 Save your life

Imagine you out in the wilderness and lose your way. Your smartphone can help you find your way back to civilization. Most smartphones come equipped with GPS sensors and navigation software. Apps like Sygic, and Nav free allow users to download maps of entire countries onto the smartphone. These apps and phones do not need access to mobile networks and data plans.

The apps use GPS satellites to pinpoint your position accurately displaying it on the map stored on your SD card. All you have to do is zoom out to find the closest city or town.

You can even use the battery of your smartphone to start a fire. Check out this video: dgit.in/fiyastata showing you how.



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Cheaper Mars travel

Mathematicians have come up with a ballistic capture method, to make travel to Mars cheaper
<http://dgit.in/CheaperMars>

Samurai Star Wars

What would happen if Disney puts a Japanese twist on Star Wars? Head here to know:
<http://dgit.in/MoshiForce>

WIN Upping Your Mind Power

While the cynics talk about the adverse effects of technology and how it makes us lazy, phones, tablets and laptops can actually do a lot otherwise. Productivity and other usage aside, technology today can help you sharpen your mind. That applies to both children and adults.

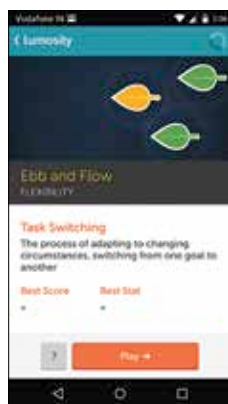
Prasid Banerjee

prasid.banerjee@thinkdigit.com

Buying gadgets today costs a lot of money, more than it did a few years ago. The reason is that you can do a lot more with them and it's your choice how you want to use them. Your phone can easily be used to improve how sharp you are or how fast your mind works. In fact, it is as easy as going to the Play Store and downloading a free app. Such apps include both games and productivity related apps.

Games

Lumosity: This is an online brain training and neuroscience research company. You can download the app for free and gain access to games, which improve your concentration and overall brain power. An example of a Lumosity game is a



bunch of leaves, coloured yellow and green, moving in a certain direction. You, the user, has to simply swipe in the direction that the green leaves point and in the direction that the yellow leaves move.

It is basically

a representation of brain exercises that many researchers and doctors give to their subjects and patients. What might interest you even more is that you can also access Lumosity on your PC through its website or download the Chrome Extension for it.
<http://dgit.in/LumosityAnd>

Brain Trainer Special: This app also brings you games that can improve certain aspects of your mind. The free version has games that improve your abilities in Math, Analytics, Concentration, Observation and Memory. A simple math game in this app shows you a bunch of floating cubes, with numbers on them. You have to then enter the sum of all those numbers. Simple math, but effective when used enough.

Similarly, the memory training game shows you a bunch of names and numbers associated with them. It then asks you to



type down the number of one of those people.
<http://dgit.in/Brain-TrainS>

Reading and Writing

Elevate: This app takes a little bit of time to set up, but it is arguably the best of the lot. Elevate

makes you go through a short test (which felt quite long) and determines your skill level. It also asks you what all you would like the app to help with. You can then play relevant games to improve your reading, writing etc.
<http://dgit.in/ElevateAnd>



Stress and De-Stress

We lead stressful lives nowadays and your phone can help you with that. While Samsung's newest devices come pre-installed with a heart-rate monitor, there are





Drone Life Guard

Drones carrying a self-inflating preserver ring can be used to save people from drowning
<http://dgit.in/DroneLfGuard>

NSA's Christmas gift

NSA had been spying on people for long and now they have released their erroneous spying attempts
<http://dgit.in/NSASurv>

Feature

apps that can take advantage of existing phone hardware to monitor stress levels.

Stress Check: The Stress Check app on the Play Store tells you exactly how stressed you are. In order to do this, you need to stay still and let the app monitor your pulse, heart rate etc. It even checks the time taken between heart beats, in order to determine how stressed you are. It quantifies physical and psychological stress and gives it to you in percentage terms.

<http://dgit.in/StressChk>

Sleep Better

Researchers have often showed that certain kinds of music help you achieve better sleep cycles and hence improve your overall health. Sleeping better helps you stay focused and energised, so that you don't slack off during important activities.

Relax and Sleep: This is perhaps the simplest app that we've written so far, but it is also one of the most useful. You know how people often fall asleep while listening to music? Well, this app does just that. It is a compilation of music, from acoustic guitar to white noise, which you can play while sleeping at night. It is something like hypnotherapy, only without a voice telling you what to do. The app will play the music, calming you down and helping you sleep better. Oh and the app icon reminds you to count sheep if you find it hard to sleep.

<http://dgit.in/RelaxSleep>

Education

Education is one of the more recent additions to Android. While apps in this

segment have existed for quite a while, big names like Coursera and Udacity have joined the fray now. The premier online learning portals are now available through Android and iOS apps, meaning you can work on that course you chose while you're on the move.

When you're outdoor, travelling and

have time, you can watch lectures and read through course material on your phone or tablet. When you're indoors, you can cast the content on to your television and enjoy the bigger screen experience.

Udacity: <http://dgit.in/UdacityAnd>
Coursera: <http://dgit.in/CourseraAnd>

Udemy: <http://dgit.in/UdemyAnd>



Reading

No, nothing replaces the experience of reading a hard-

bound book when it comes to reading, but tech can help in other ways. Reading has long been the best way to improve your vocabulary and diction and it's sad that more people don't do it anymore.

The Kindle and Kobo e-book stores are very good for buying e-books and reading them on your mobile device or computer. So, stop making excuses for why you don't read books and get on it. Both the apps have eclectic collections, ranging from fiction to self-help, both paid and free. Even the Google Play Books section is a good option.

Kindle: <http://dgit.in/AmKindle>

Kobo: <http://dgit.in/KoboAnd>

News apps

Sharpening your mind doesn't end their either, even something as simple

as the Google Play Newsstand, can help you. Every major media outlet has an app that can be used for reading the news and improving your awareness. News apps: <http://dgit.in/NewsAppAnd>

Others

Su-Doku

The Play Store also offers a variety of apps modeled after the magic square game, better known as Su-Doku. Not only does it help you improve your math, but it increases the power to concentrate as well, while also making your brain sharper. If you don't want to wait for the one Su-Doku puzzle your newspaper will give you every day, Android's Play Store is more than what you can handle.

You can choose from a variety of Su-Doku apps, most of which are free. In addition, you can access higher level Su-Doku puzzles as well.

<http://dgit.in/SuDokuAnd>

2048

One of the most irritating, yet loved and downloaded games of this year. 2048 is somewhat similar to Su-Doku. Just by the looks though, this app also provides you with a square and multiples of the number two pop-up as you swipe across the screen. The goal is to add up the numbers and get 2048. The catch? 2 can only be added to 2, 4 to 4, 8 to 8 and so on. Millions have downloaded it and only a handful have actually been able to get the number.

The game has results similar to Su-Doku, in the fact that it improves your concentration and patience considerably, two things that are lacking, especially in the youth today.

<http://dgit.in/1EtLBms>



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New malware

Regin, a new type of Trojan that is most probably a powerful spying tool has been detected recently. http://dgit.in/Regin_Spy



For VR!

Google is pushing its extremely low-cost virtual-reality based Cardboard idea on the Play Store. Head here to know more: http://dgit.in/Yes_To_VR

WIN AT Staying Healthy

There are many ways technology can help you lead healthier lives. Here are some tips on the best apps, hardware and practices to make you fitter.

Nikhil Pradhan
nikhil.pradhan@dgit.in

We've finally reached a point in the evolution of personal technology where it can be used to not only enhance our productivity but also help us get healthier. In fact, health has become a major talking point for all the big names in personal computing today with both Apple and Google investing plenty of time and money in developing their own health platforms. The premise of using technology to enable healthy living has also received a shot in the arm with the emergence of wearables as a viable product segment.

Moving into 2015, we'll see many more ways how technology will help us live healthier, better lives. Rest assured, Health will no longer exist as a mere buzzword in the context of personal technology.

Apps to help you stay healthy

One of the simplest ways technology is helping people all around the world get healthier is through apps on smartphones and tablets. Health apps have been around forever and are used to track workouts, runs, diets and even medication schedules and health data like heart rate and blood pressure. Some of the most popular health related apps today are:



Apple health

Health (iOS)

Health is so important to Apple that it may soon supplant Music in the company's priorities. Some would say that the shift has already begun after Apple unveiled its Health platform with iOS 8 along with Healthkit, a set of tools for developers to help them

make use of Health. Health is both an app and a platform that collates all of the user's health related data as gleaned from different apps. This allows the user to see all his data in one spot and also lets apps read health data from other apps to give the user a more complete picture.



Google Fit (Android)

<http://dgit.in/1xHvVbt> (Android)
Fit is Google's answer to Apple's Health and essentially has very similar features.

Like Health, Fit also serves as a one-stop repository of all your health data procured by the various apps you've got installed on your smart device, accessible to both you and other apps. If you've got an Android Wear device (for instance the Moto 360, the Zen Watch or the Gear Live), then you can install Fit on it as well, and have access to some of your data on the second screen.

Instant Heart Rate (iOS, Android)

<http://dgit.in/1xHw6nh> (Android)

<http://dgit.in/1xHwfac> (iOS)

One of the many heart rate monitors for both iOS and Android, Azumio's Instant Heart Rate is a simple app with one objective - it quickly measures and tells you your heart rate. All you need to do is place your finger on your phone's camera and the app will give you the requisite data. This way you can quickly judge if your workout is too strenuous or just right.

Nike+ Running (iOS, Android)

<http://dgit.in/1xHwvGa> (iOS)

<http://dgit.in/1xHwylN> (Android)

One of the first and most popular apps to track your runs came from sports apparel powerhouse, Nike. Unlike other run-tracking apps that came later, Nike+



Nike running



Weird Hexapods

Researchers at Carnegie Mellon University are using robotic snakes as legs for hexapods
<http://dgit.in/HexaSnakes>



Programmer wisdom

The root is at the top of a tree! These and other witty truisms about programming here:
<http://dgit.in/progwit>

Feature

doesn't waste real estate on its interface or your time with superfluous features and just lets you get to running, all the while tracking your run on the map. Nike+ also gives you access to 'instructors', who motivate you through your earphones, and also lets you compare and share your runs with your friends over social networks.

Calorie Counter - MyFitnessPal (iOS, Android)

<http://dgit.in/1xHx5nn> (Android)

<http://dgit.in/1xHx7Mb> (iOS)

Apart from working out and going for runs, one of the essential things to keep in mind when trying to stay healthy is your diet. Calorie Counter helps you stick to your diet routines and keeps track of your calorie intake. The app gives you access to a huge database of food and lets you input every meal that you're having in order to figure out your calorie intake.

RunKeeper (iOS, Android)

<http://dgit.in/1xHxgyV> (iOS)

<http://dgit.in/1xHxqXh> (Android)

If you find Nike+ Running too simple for your tastes, then you can check out RunKeeper. RunKeeper does not only track your runs but also your entire workout plans. You can also use it to train for marathons and employ different training schedules to improve your workout plans. Plus, like with Nike+ Running, you can share your progress with friends and also compare with each other.

WebMD (iOS, Android)

<http://dgit.in/1xHxxCe> (Android)

<http://dgit.in/1xHxAQi> (iOS)

Okay, WebMD may be a heavensent tool for all the hypochondriacs and the armchair 'doctors' around the world, but that doesn't



WebMD

mean that it can't serve an actual purpose. The fact is that WebMD is one of the largest storehouses of medical data in the world and, provided, you are smart about the way you use it, it can be an invaluable tool. The WebMD app for iOS and Android is well-designed and has a very simple interface. You can use the app to check for symptoms, discover treatments, identify medication and get first aid training, among others. WebMD is an essential app for anyone with a smartphone.

Zombies, Run! (iOS, Android)

<http://dgit.in/1xHxE0o> (iOS)

<http://dgit.in/1icNGLd> (Android)



Zombies Run

Even if your running needs have been met by Nike+ Running or RunKeeper, you may sometimes find you need more motivation to go out on strenuous runs. If that's the case, then you owe it to yourself to try out Zombies, Run! The app puts you in an immersive game where you have to run away from hordes of zombies and the more you run, the more resources and points you collect to keep yourself safe. The app tells you a neat story using audio notes and instructions and will ensure that you turn every run into an interesting game.

7 Minute Workout "Seven" (iOS, Android)

<http://dgit.in/1xHxJRT> (iOS)

<http://dgit.in/1xHxQNo> (Android)

As much as you'd like to stay healthy and exercise everyday, you'll often find yourself constrained by your daily schedules. If you're the sort who finds very little time in the morning (or evening) to go out for a run or to the gym, then the Seven app is for you. The app helps you engage in an intense workout that lasts only seven minutes but focuses on almost all the important muscles in your body. When you run the app, it starts a 30 second timer for each exercise and offers a total of 14 exercises. Plus, you also get an instructor who encourages you through audio.

Strava (iOS, Android)

<http://dgit.in/1xHxTbL> (iOS)

<http://dgit.in/1xHxUg4> (Android)

You may find that the Strava app is very similar to RunKeeper in terms of features and usability. However, Strava is one of the most popular apps among cyclists who use it to track their cycling routes and compare and share it with their



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*Conditions Apply. All Specifications are subject to change without prior notice.





Warrantless search

A new bill passed in the Romanian Parliament lets its security services do warrantless access to privately owned data <http://dgit.in/RomaniaSec>



Epic stunt

Airbus used five A350's to do crazy stunts in the air. Watch \$1.5 billion worth of awesomeness here: <http://dgit.in/StuntAirbus>



Strava

friends. Strava is also better designed and has some neat features like keeping you constantly updated on how your current cycling session compares to your previous one. Plus you can also join various groups started by cycling enthusiasts in your city through the app.

Stay Healthier at the Computer

The truth is while many of us would love to exercise daily and go to the gym, most of us never do or even if that's not true, we have sedentary jobs that put us in front of a computer all day long, essentially negating all the good that workouts do. If you've got a job that makes you sit and stare at a computer screen for most



Keep your monitor at eye level

of the day, then you'd be wise to ensure that you follow some basic tips to keep yourself healthy.

Protect your eyes

Most workout plans tend to ignore your vision but it's your eyes that are used the most, especially if you sit at a computer at work. To protect your eyes, make sure that, more often than not, you look at black text on a white background. Your monitor should be as bright as your surroundings and not too dim or too bright.

Check your office's lighting to ensure that you don't have bright lights that directly fall on your monitor. Every 15 to 20 minutes, turn away from the monitor and try to focus on an object in the distance, this will help your eyes relax. Finally, try to keep the centre of your monitor about 7 to 10 inches below your horizontal line of sight.

Maintain Good Posture

Your posture or the way you sit in the front of your computer is also an extremely important factor in determining your health. Your office chair should have good back support and when you sit on it, your feet should fall flat on the floor or on some other support to ensure that your back isn't under undue stress. Don't rest your elbows on the edge of your desk or any other hard surface. They should also be at an angle of 100 to 110 degrees in relation to the keyboard to prevent your wrists from acting up. Also, try to keep your neck as relaxed or straight as possible. If you've been sitting at your desk for close to an hour, take a two minute break where you walk around and stretch your muscles.

Hardware to help you stay healthy

Finally, if you're really conscious about your health and don't mind spending a bit of money, you should consider picking up devices whose sole focus is health and fitness. Thanks to both Apple and Google's decision to take an interest in health, we now have many third-party manufacturers, big and small, who've launched health focused tech hardware.

Let's take a look at some fitness tech that are worth your money:

Sony Smartband Toq (SWR10)

₹4,990

The main features of the Sony Smartband have to do with notifications; i.e. it informs you of incoming messages, missed calls etc. on your smartphone by vibrating gently. However, Lifelog, another one of its main features has decent fitness implications. Once you install the Lifelog app on your smartphone, it uses the Smartband to record

all your activities including steps taken, distance run etc. It also analyses your sleep cycles and habits to wake you up at the optimal time.

Garmin VivoFit

₹7,990

The Garmin VivoFit is a water resistant activity tracker that records all your daily activities and suggests goals based on that. It provides you with a lot of information, including the distance you've travelled and the calories you've lost as compared to the previous day.

JBL Synchros Reflect in-ear headphones

₹3,990


These JBL earphones are perfectly suited for your daily workout. If you like to go out on your runs in the early morning,



Get the right headphones for extra motivation

then the reflective coating on the Synchros' cables will keep you visible to those driving vehicles in the dark. Apart from pumping out balanced sound, the Synchros Reflect also keep away the annoyance of tangled cables with the help of in-built magnets on the housings that stick the buds together when not in use.

Xbox One (with Kinect)

Health and gaming never mixed until Nintendo launched the Wii console in 2006. With motion tracking games now mainstream, it's only obvious that the new generation of consoles would improve things. The Xbox One with the Kinect accessory is a fantastic gadget to help you get fitter in the comfort of your living room. If you do plan to get the Xbox, then make sure you also pick up games like Xbox Fitness, Zumba Fitness World Party and Just Dance 2014. 

worldview

OUR PICK OF THE BEST TECH ARTICLES FROM AROUND THE GLOBE

(MUST READS)



WHEN THE HUBBLE BURSTS

With its 25th birthday approaching, the Hubble Space Telescope has already seen several upgrades, both to its hardware and its software. But, with other more advanced projects in the offing, viz, the James Webb Space Telescope. There are two options for the boffins at NASA – either send a manned mission to fix it up or let the earth's gravitational pull bring it to a fiery end.

http://dgit.in/Hubble_Bubble

WATSON FOR THE WORLD

If you're the type to whom raw data and numbers make absolutely no sense, IBM's Watson is for you. It's a cognitive data analytics service where users can upload data as a spreadsheet and leave all the number crunching and analysis to it. The result is a visual representation of the findings as graphs, maps and even infographics.

http://dgit.in/Smooth_Watson

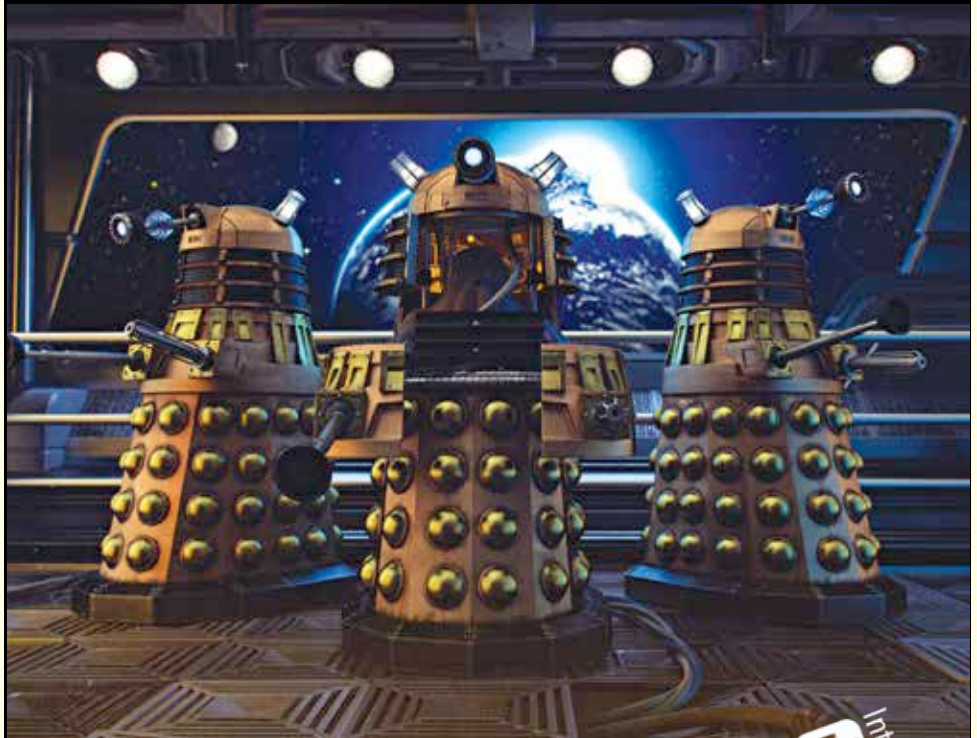
BACK MUSCLES FTW

It's well known that sitting at a place for a long time wreaks havoc on your back and core muscles. To combat the effects, Dutch design firm RAAF introduced the standing desk that is aimed at getting people to spend more time on their feet and it's proven to be quite effective at making people feel more productive.

<http://dgit.in/BackMuscles>

[Aeon Corner]

ROBOTS TAKING OVER



Robots have been painting cars and cleaning rooms, but driverless cars are getting closer and closer to reality. The robot, expected to be a humble servant has grown up and is ready to take over the world. Definitely not in a cartoon-esque way (we hope).

<http://dgit.in/BetterDaleks>



Win at Farming

Salt is bad for plants. So bad in fact, that salting fields leaves them fallow. This means that giving your plants salt water is like shooting yourself in the foot. Not with the seashore mallow, a perennial plant whose seeds are 18 to 20% oil and could be used as biofuel.

http://dgit.in/Boss_Farmer



Euro(pa) Trip

The only reason we're obsessed with Mars is because it's close by and as there are clear signs telling that there was water here a long time ago. But recent finding suggest that Jupiter's moon Europa could have had organisms beneath its surface billions of years ago.

<http://dgit.in/ToMarsWeGo>



CopyPaster>Coppypasta>Creepypasta

From stories that are entirely made up, just to creep you out to retelling of incidents that happened to friends of friends, creepypasta are weird to say the least. Not the kind of weird that we relate to today though. Head to the link to meet modern fear for yourself.

<http://dgit.in/OhhTheHorror>

HOW TO WIN A F1

The average F1 car has four wheels. The above average car has six. Introducing, for two seasons only, the Tyrell Ford P34. A better car in theory, it had four smaller wheels in the front giving it better grip, handling and breaking. Although quite interesting, sadly, it was a hit or miss type of car.

Link: <http://dgit.in/HowToF1>

CHOP WOOD LIKE A BOSS

Chopping wood isn't easy and it only took thousands of years and the Finns to do something about it. Presenting, the Leveraxe or the Vipukrives 2. The Leveraxe has a weight set off to the side which helps strip the piece of wood apart.

Link: http://dgit.in/Chop_Chop

WIN AT... WAR?

While the US Army is still running around with heavy backpacks without any external aid, DARPA is one step closer to giving soldiers super-human strength. Their upcoming low energy exosuits can be worn under uniforms, giving soldiers the ability to carry weights of up to 100 pounds.

Link: http://dgit.in/War_Ahoy

HOW TO WIN AT EVOLUTION

Evolution takes time. It took us thousands of years to get where we are. If there is some other life-form in the universe from a long time, it may have evolved to a great extent. Susan Shneider – SETI's director at NASA believes that the aliens we might meet could be robots. Huh?

Link: http://dgit.in/Beat_Darwin

Mumbai Comic Con 2014: cosplayers and gear galore!

We look into all the things that amazed and disappointed us in the fourth edition of the Mumbai Film and Comics Convention

– By Abhijit Dey

Originally started in Mumbai in the year 2011, Mumbai Comic Con 2014 saw the best cosplayers and artists from all over the country under a single roof. The sheer hardwork put in by the cosplayers was truly commendable, who obviously spent weeks

on an all expense paid trip to the Oz Comic Con in Australia next year.

We were quite intrigued with the level of details cosplayers had put into their costumes, making it hard to believe they weren't stolen replicas from the sets of movies or video game developers' studios. My attempt

to cosplay was brutally destroyed due to bad time management and I ended up convincing myself that I would surely dress up for the next year (I'm great at lying to myself).

As we entered the Bombay Exhibition Centre, we easily guessed the amount of people we would be pushing through at the end of the day. Spotting the familiar characters

across the floor was like a quick quiz-up, battling and testing each other's knowledge of popular geek culture.

What was probably the highlight of Comic Con this year was Mark Gatiss. He was present throughout the three days of the convention, attending the special screening of "An Adventure in Space and Time" and an interaction session with his fans. He was also there for signing sessions which was only for a select number of fans each day. The fans had many questions for Gatiss, mostly useless, because they were searching for

spoilers from the upcoming seasons, which obviously he wouldn't reveal and he was repeatedly bombarded with silly questions. But you know what they say about the Brits, the more silly questions were shattered with a pleasant grin by Gatiss, showing utter wit and classy sarcasm. Gatiss may have even felt like a One Direction member owing to the incessant screaming from fans that went on throughout the session. There were hardly any good questions, but a couple of them were thankfully pertinent. You can read more on the Mark Gatiss interaction session in our slideshow here: http://dgit.in/36_Cosplays



making their costumes. This year again, there was a maze of T-shirt stalls spread across the venue, with great pieces of art equally dominating the event. The convention saw many sessions from writers to artists, including co-creator and executive producer of BBC's Sherlock, Mark Gatiss, who is also the writer of the popular revival of the Doctor Who series. Sessions had comic book author Nick Spencer and also the author of Kabul Disco, Nicolas Wild. It didn't end there as we also saw cosplay contests that gave participants an opportunity each day to win



WIN AT CLEANING UP

While Sparta had 300 braves trying to keep it clean, the largest particle accelerator in the world has a crew of 100. If you're going to be smashing atoms and such, you're going to make a mess and here's the story of the people who do what they have to do in the name of science.

Link: http://dgit.in/Cleann_Up

PARKING FTW

The worst part about driving to the mall is parking your car. It's bad enough that it costs you a bomb, but things get worse when you circle the lot, looking for a spot. This could soon be a thing of the past as BMW introduces some interesting tech that can revolutionise parking completely.

Link: <http://dgit.in/ParkBetter>

WIN AT WINTER

If it's the cold time of the year, you've got to hate the numbness in your fingers after a night out. Here's a nifty solution that you can whip up with the kind of materials you'd normally find in your fridge or under the kitchen sink. You can thank us later.

Link: http://dgit.in/Beat_Winter

LANDING ROCKETS LIKE A BOSS

Elon Musk is back and wants to change space travel. As booster rockets fall away from space shuttles and can never be used again. SpaceX wants to change that and plan on landing a Falcon 9 rocket on an artificial platform in the middle of the ocean. Here's how:

Link: http://dgit.in/Land_Rockets

What is Comic Con without mind-boggling cosplays? This year too we got to witness amazing costumes and also saw professional cosplayers taking the floor. Doctor Who fans were among the most spotted, with Doctors, Time Lords and people wearing the fez crawling all over the place. Talking about the best costumes, it had to be the cosplayers from the Naruto universe, or rather, everyone from the anime universe, who showed dedication and pride through their characters. There were many League of Legends and Final Fantasy cosplayers too, who could be right away cast for a live action trailer for both the games. L from Death Note was also a popular choice, one cosplayer actually showing up bare-footed. Then there was Captain Titus of the Ultramarines from the popular game Warhammer: 40K, who really made the whole suit. We expected parents dressing up their children as Elsa, and also thought we would bump into Star Lord (which we did but he didn't have a mask). Patrick Bateman from American Psycho was



Among the clutter of handmade weapons, one could not ignore the brilliant artwork that was seen in this year's comic con. From custom painted shoes to eco-friendly wallets to catchy coasters and wonderful sketches, they had it all. Many artists set up stalls and made caricatures and live paintings, inspiring the budding artists who attended the event. You will love all the artwork at comic con in the slideshow.

It was nice to see parents encouraging their kids to cosplay and we also heard of a whole family dressed up as The Incredibles who left early. The volunteers did a great job in catering to the needs of the attendees, showing no signs of fatigue, wearing a pleasant smile all the time.

Though it may seem like a wonderful event, some things got us really distracted. Like last year, this year too we saw too much merchandise, a lot of which appeared lazily made but costly. The Star Wars Zone was really disappointing, and totally not what it had been hyped up to be. After short ses-

sions of eavesdropping on conversations we came across a few cosplayers who glared down on people who couldn't recognize their characters, questioning their existence in the world. But thankfully, we also



also seen in a groovy mood, carrying an axe, all covered in blood, nothing unusual.

Have a look at the best cosplayers that we came across here. And also the cosplay contest, judged by professional Japanese cosplayers Miya and Shiguma, can be seen in the slideshow online.



met many folks who were open and friendly about their interests and invited discussions, putting a lovely shine on our experience at the Mumbai Comic Con 2014.

For a lot more on what happened at the Mumbai Comic Con you can check this link: http://dgit.in/2014_MCC

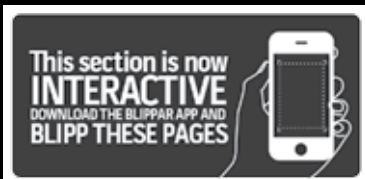
COLLECTIVECADENZA

From a medley consisting of songs with epic key-changes to a series of videos chronicling the history of instruments from

cdza

classical music to contemporary pop and rock, Collectivecadenza is a whole bunch of musical geniuses who come together to make musical experiment videos. Visit the channel to get musically inspired or have a good time.

<https://www.youtube.com/user/collectivecadenza>



For a list of all the links from this section, head over to <http://dgit.in/WorldViewJan15>

(PRODUCT LAUNCHES)

MICROMAX YU YUREKA



Thanks to the exclusive deal between Cyanogen and Micromax. The Indian phone manufacturer has launched the YU Yureka, a smartphone based on Cyanogen OS 11 with a 5.5-inch 720p screen and a 64-bit 1.5GHz Snapdragon 615 octa core processor. Cost: ₹8,999

BLACKBERRY CLASSIC



BlackBerry are walking down Porsche's path and aren't asking them to do any designing this time. They're giving some classic love to their new QWERTY phone. Here's hoping it gets around as much as your passport and not BlackBerry's. Cost: ₹30,800 approx

VIVO X5MAX



Measuring at a thickness of only 4.75mm, the newest contender has achieved the title of the slimmest smartphone ever built, leaving behind the 4.85mm thick Oppo R5. Another highlight about the phone would be that it supports Hi Fi 2.0. Cost: ₹32,980

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Top 3 YouTube Picks

Make sure your boss doesn't catch you goofing off with one of these videos playing on your screen



Science Experiments FTW

What you can do with a battery, some magnets and a lot of copper wire is amazing. Here's a simple experiment to try on a lazy afternoon. http://dgit.in/For_Science



Angel Rice... 5 Double Twists...

In what can only be described as a superhuman feat, watch a cheerleader redefine the meaning of many things. <http://dgit.in/EpicCheerleader>



How to win at wrestling

Still think pro wrestling isn't scripted? Maybe this will change your mind. Warning: May contain several exclamation marks and dancing. http://dgit.in/Pwn_Wrestlers



12 Million routers affected by Misfortune Cookie Flaw. To know more visit : <http://dgit.in/MisCook>

An Intro to Backbone.js

>>If you've ever shopped around for a framework for making single-page apps, chances are you have come across

Backbone.> by Kshitij Solti

Backbone is a JavaScript library that provides a collection of modules that work together but can just as easily be used independently. It doesn't preclude using other JavaScript frameworks / libraries such as jQuery. In fact, using jQuery is encouraged.

This flexibility can be freeing if you find other frameworks / libraries to be restrictive, but can also make Backbone hard to approach. Hopefully, this article will help you sink your teeth in deep enough that you can delve deeper on your own.

Before we dive into Backbone though, let's first understand what it is trying to do.

Chances are any web app you make involves manipulating data, and figuring out how it's to be displayed in an HTML document. It's common to load data from a web service as JSON, or XML, process it in JavaScript, and then display it in HTML. At this point you have multiple representations of the same data in your application that need to be kept in sync. If you are not careful in structuring your application, you can end up with code that is tied to your DOM.

This is where Backbone comes in with some basic modules that you can build your app on. These are basic enough that they are



applicable to nearly every app. They also don't make unnecessary assumptions about the structure of your code.

Backbone's modules will look familiar to those who know of MVC (Model View Controller), but know that it doesn't follow many of the conventions of MVC frameworks. Backbone includes four major components, the Model, the Collection, the Router, and the View.

Boilerplate

Like with any JavaScript library, before you can begin using it, you need to set up a basic HTML page that includes it, and any dependencies it has. The following code includes jQuery, Underscore (a requirement of Backbone) and Backbone all loaded directly from the internet, so you needn't source them locally.

*coding matters



*Coding Infographic

>>There is a plethora of programming languages out there, but which one should you choose to learn? Have a look into this infographic to pick the programming language according to your uses and benefits.

<http://dgit.in/PickCode>



*Spell corrector code

>>If you've wanted to make your own spell corrector but thought it was too complex to be coded, then you need to have a look at this python code of just 21 lines that claims to be almost 80 to 90 per cent accurate.

<http://dgit.in/SpellChk>



*Attention JAVA coders

>>JAVA is quite popular now and as more people accept this language, a cheatsheet is always required while one spends sleepless nights of coding. Here you can have a look at the JAVA cheatsheet by Princeton University.

<http://dgit.in/JCheatSheet>


```
<!DOCTYPE html>
<html><head>
<script src="//cdnjs.cloudflare.com/ajax/libs/
jquery/2.1.1/jquery.min.js"></script>
<script src="//cdnjs.cloudflare.com/ajax/libs/under-
score.js/1.7.0/underscore-min.js"></script>
<script src="//cdnjs.cloudflare.com/ajax/libs/back-
bone.js/1.1.2/backbone-min.js"></script>
<title>Backbone.js playground</title>
</head><body></body></html>
```

You can play with this code online on JS Bin at <http://jsbin.com/fineviyejo/1/edit>



Yeoman is a great tool for bootstrapping web projects. It properly structures your code in folders, downloads required libraries and builds and packages web apps from the command line.

Backbone.View

Let's start with the bits of Backbone that actually shows something on the

page. Here is a bare minimum View that when rendered and added to the page will display a button called "Hello World".

```
var Hello = Backbone.View.extend({
  tagName: 'div',
  className: 'hello',
  render: function() {
    this.$el.html('<button>Hello World</button>');
    return this; } });
```

Let's unpack this. In this snippet, we are creating a new custom View by extending the base Backbone View. The `tagName` and `className` properties define the tag that surrounds our view, and its class. In fact, if we just want a `div` then we need not even include a `tagName` since it defaults to `div`.

The `render` method is responsible for actually creating the content of the view. Here, it is adding the button labelled 'Hello World'. Backbone views have an `'el'` property that represents the raw JavaScript DOM representation of our view. If you are using jQuery then `$el` will be the jQuery-enhanced version the view.

The Backbone-Eye add-on for FireBug and Firefox is a great way to inspect running Backbone apps.

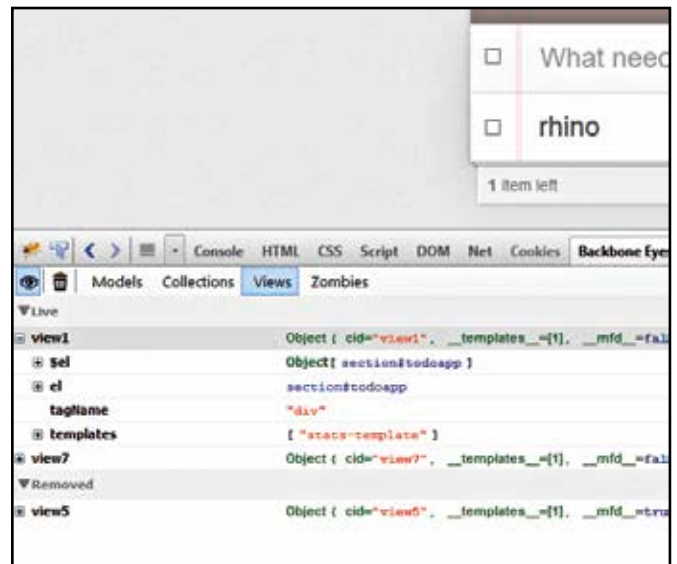
In the `render` method, we use the jQuery `html` method to set the content of our view's element. You could have directly manipulated the raw non-jQuery representation via `el` if you so desired.

To actually have this show up on the page, we first need to create an instance of the above view, and add it to the page body. The following lines of code should take care of that:

```
var h = new Hello;
h.render();
$("body").html(h.$el);
```

We first create a new instance of our new View, we then render it, and finally we set the HTML content of the page body using jQuery to our rendered view accessible via the `$el` (or `el`) property.

Backbone is flexible enough that you could possibly automatically render the view in its `initialize` method and even



View sections under the View tab

add it to the page body. This is what the flexibility of Backbone gets you.

Now let's take this a step forward. We want this button to display a counter that shows how many times it has been clicked. The first step in this process will be to add an `initialize` method that sets this count to "0" (zero) in the beginning. Then we need some way to listen for, and respond to a mouse click event.

Thankfully, Backbone makes both very simple. You can add an attribute called `events` to the button that maps events to their corresponding methods. Here is our completed code (we removed some unnecessary stuff):

```
var Hello = Backbone.View.extend({
  initialize: function() {
    this.count = 0;
  },
  events: {
    'click button': 'updateCount'
  },
  updateCount: function(event) {
    this.count++;
    this.render();
  },
  render: function() {
    this.$el.html('<button>Hello World: ' + this.count + '</button>');
  } });
```

What's going on in the `initialize` method should be fairly obvious here; the more interesting bit is in `events`, the format of which is quite simple: `'event selector': 'callback'`

So in the above code we are listening to the `click` event on the element that matches the selector `button` and then calling the `updateCount` method in response. You can also listen to other events such as `mouseover`, `dblclick`, or `contextmenu`. The selector bit is the kind you use with jQuery to match elements, so it could be something like `#btn.test.example`. As you click the button you will see that the view will automatically update on page!

Backbone.Model

Backbone models are as flexible as the Views, leaving a lot to the developer. The most basic model you can create is essentially an

empty one that extends from `Backbone.Model`. This doesn't mean that it does nothing though! It simply means we don't need to add anything to the features Backbone already offers. We'll start with an empty model, and then store some data in an instance of it.

```
var Contact = Backbone.Model.extend({});
var graceHopper = new Contact({
  name: 'Grace Hopper'
});
console.log(graceHopper.get('name'));
```

The above code creates a Model for contacts called 'Contact', creates a new `Contact` variable with an attribute called `name`. We also demonstrate getting this name attribute out of the model and logging it to console.

Now let's demonstrate some of the juicier features of Backbone. We'll add code that listens to changes in the model, and outputs the raw JSON content of the model.

```
graceHopper.on('change', function() {
  console.log(graceHopper.toJSON());
});
graceHopper.set({'about': 'Inventor
of first compiler.'});
```

Let's go backwards with this. Notice how easy it is to set a new attribute on our object. You could as easily supply a new name attribute to change it; you could even supply multiple attributes at once.

The first bit of code that calls the `on` method is adding an event listener, that will call the supplied method when any attribute is added or changed. The method supplied here logs the JSON representation of our data to console using the `toJSON` method. You can have multiple statements and can even listen to changes in specific attributes if you want. For instance, if you just wanted to know when the `name` attribute has changed, you can replace the change above with `change:name`.

Models get even more interesting when server-side data comes into the picture. This is expertly handled by Backbone using just a single attribute: `urlRoot`. If you have server-side data accessible via a RESTful interface that provides JSON data, you're all set to go with Backbone. Let's say your server at 'http://myserver/' provides a list of contacts at 'http://myserver/contacts' and lets you access an individual contact by id at 'http://myserver/contacts/' you should set `urlRoot` to 'http://myserver/contacts'.

Once you have set the appropriate `urlRoot` Backbone can automatically fetch data and put it in the model for you to use. Let's look at an example:

```
var Contact = Backbone.Model.extend({
  urlRoot: 'http://myserver/contacts' });
```

*pointers

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<http://dgit.in/SwiftiOS>

```
var contact1 = new Contact({id:11});
contact1.fetch();
```

This code will fetch the data about the contact with id 11 from the server. You can modify this data and then call `contact1.save()` to post the changed data back to the server.

Backbone.Collection

Where Model deals with a single data object, a Collection deals with a bulk of data objects.

In our case, we can create an `AddressBook` collection that has a list of contacts. Once we create this Collection we can specify a `url` attribute that points to the list of contacts on the server, and it will automatically populate the collection with models when you call the `fetch` method on a Collection instance. You specify which Model this Collection is "collecting" via the `model` attribute.

Once you have a Collection of Model objects, you can use the `where` method to search for models matching certain attributes, fetch individual models based on their index in the Collection, or their id on the server. We demonstrate all of this in the following code sample.

```
var AddressBook = Backbone.Collection({
  url: 'http://myserver/contacts',
  model: Contact
});
var contacts = new AddressBook();
contacts.fetch();
var developers = contacts
  .where({'job': 'Developer'});
var person_at_position_11 = contacts.at(11);
var person_with_id_11 = contacts.get(11);
```

Backbone.Router

The final piece of the puzzle that we will look at is the Backbone Router. This is the module that makes navigating to different parts of your app work. It can map changes in the state of the app to changes in the URL, so it is possible to bookmark specific locations within the app. For instance, in a contact management application a user might want to bookmark a specific contact and go to it directly rather than needing to navigate to it every time.

Here is a sample router for such a contact management application:

```
var AppRouter = Backbone.Router.extend({
  routes: [
    'contacts', 'contactsList',
    'contacts/:id', 'contactDetail'
  ],
  contactsList: function() {...},
  contactDetail: function(id) {...}
});
var router = new AppRouter;
```

```
Backbone.history.start({pushState: true});
router.navigate('contacts/11', {trigger: true});
```

The routes hash lets you specify different locations within the app, and the method to be called when navigating to that URL. Here, we map the contacts path within the app to the `contactList` method, the second path has an `:id` parameter that is passed to its corresponding method, `contactDetail`. These methods have been blank here, but you could imagine what they'd do; initialising your models and collections, fetching remote data, and updating the UI.

After creating the router, and instantiating it in the `router` variable we call the code in Backbone that actually handles all this with the `Backbone.history.start` call. The `pushState` parameter set to `true` allows the browser to use neat urls such as `'http://myappsite.com/contacts'` instead of hash fragments such as `'http://myappsite.com/#contacts'`.

The final method call tells the app to go to a specific page within the app, and the trigger parameter set to `true` simply tells the Router to actually call the corresponding method instead of just changing the URL.

Putting the Pieces Together

You may have noticed that till now that we have used each component almost independently of other components. This is one of the strengths of Backbone. You can use bits and pieces of it in your own app without converting your whole app to it. Just want to use the Model and Collection modules to pull in data, go ahead! Like how Backbone Views work, use them without bothering with the rest. Or use the Router module alone to navigating within your app without bothering with Views, Models or Collections. This isn't to say these components don't work well together.

Frameworks like Marionette build on Backbone by extending existing Backbone modules and introducing new ones. For some they can be easier to start with than Backbone.



When creating an instance of a Backbone View, you can pass an instance of a model to bind the model to the view. For example: `var contactView = new ContactView({model: modelInstance});`. This model is then accessible inside the view. The view can then listen to changes in the model and update the display on page automatically!

All you will need to listen to the model change events in the `initialize` method of the View. You can also pull in data from the attached model to display in the view using the `toJSON` method we have mentioned above. Similarly, you can have Views bound to collections by passing the Collection instance as a parameter just like we have done with model above: `var addressBookView = new AddressBookView({collection: myAddressBook});`

Underscore, a dependency of Backbone includes a template engine that simplifies binding model data to HTML code, but Backbone does not require its use. In fact, it will work with any template engine you want to use, such as Jade or Handlebars.

Conclusion

There is no shortage of JavaScript libraries and frameworks out there that tell you what to do, how to lay out your code, but few like

Backbone that just lay back and let you handle things yourself. This might not make it better, or more suitable for all kinds of projects. In fact, you might find yourself implementing functionality that comes by default with many alternative libraries. However, Backbone is more amenable to use cases that lie slightly outside of the scope or comfort zone of more rigid frameworks.

Backbone can also be extended through plug-ins to support features like, saving to a local storage, integrating with different kinds of services, specialised views and models among other things.

If you're still hankering for more direction, there are frameworks such as Thorax and Marionette build on Backbone and give it a more opinionated direction.>

*lumbar support



*NewsBlur RSS Reader

>>NewsBlur is a great online RSS Reader that offers some unique features. It also happens to use Backbone, and is open-source.

www.newsblur.com



*Handlebars Template Engine

>>The handlebars template engine is a great option for handling templates in Backbone apps.

<http://handlebarsjs.com/>



*Codepen

>>Codepen is a good alternative to JS Fiddle and JS Bin if you are looking for one. It's got a neat inline error reporting feature.

<http://codepen.io/>



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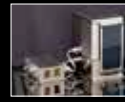
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**WIN
AT
THING!**



From the labs

We take a look at how the world aims to bring on the pain but not the reaper

**3D Printing in Space**

Behold the first 3D printer to have been used in space. First object to be created was a wrench. <http://dgit.in/3DPrSpace>

Orion:

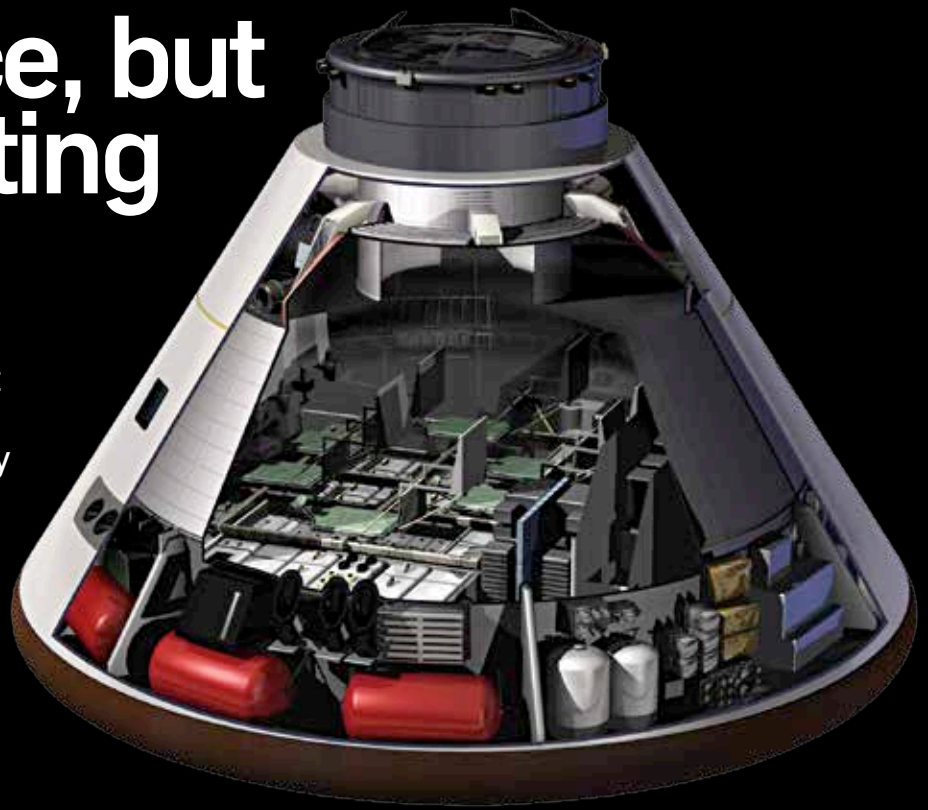
Not quite Endurance, but we're getting there

All you wanted to know about our first foray into non-terra realms, making interplanetary travel a reality

Abhishek Chaudhary
readersletters@digit.in

If we just had to create a spaceship that can take us to realms far beyond the Earth, and let's not kid ourselves – Interstellar made it clear that it is indeed necessary, then we simply could not have picked out a better name than Orion. A great hunter in Greek mythology, Orion was a force to be reckoned with. It was said that he could go into unknown surroundings and conquer them to gain supremacy. A force so well respected, Zeus himself placed him among the stars on his demise (incidentally, that came after mother Earth was angered by his vanity, but that's a story for another time). Yeah, pretty much all the good qualities that you'd want from a machine that is supposed to help us set foot on new terrains.

Alright, with that seal of approval for its name, let us consider what exactly this means for mankind, and our future in the stars.



NASA's official release of Orion's cross-section

What took us so long?

Whether or not most people like to admit it, the greatest advances in space-tech came when USA and USSR went head to head in the space race, considering it to be another lap in the race for global supremacy. Of course, after the United States won that race, things kind of slowed down on that front. The spirit of competition is probably the most powerful motivator in the world, as evidenced by humanity's innovation (or lack, thereof) for the final frontier. Until recently, that is. In the month of December 2014, NASA announced that they will be putting humans

on Mars for the conclusion of their latest series of space missions – Orion.

Orion's Significance

Orion is one of the most extravagant displays of human curiosity. After sustained criticism of our neglect of one of the most interesting domains of existence, space research has really kicked into a higher gear in the past decade. They say the greatest advances in science are evolutionary and not revolutionary. And Orion, marking our first step in our quest to move beyond the limitations of the Earth, is indeed a great increment as we chart our way to con-





Audio without headphones

This pillow uses bone-conduction technology to transmit audio to the user without reducing comfort <http://dgit.in/DreamPad>



Baidu's Dubike

Comes with tonnes of sensors including heart rate and navigational system that sends data to an app on your smartphone <http://dgit.in/Dubike>

Space Age

quering the space around us. This will be the platform on which our transport modules will be based, at least for the foreseeable future. For a challenge this significant, we simply could not go ahead and reuse the same technology that was prepared when we were aiming for low-earth orbits, or even the moon. Although the following statistics have had a lot of popular mind-share, it is still worth revisiting them just for fun. The International Space Station is about 250 kilometres from the surface of the Earth. The Moon is not even in the same ballpark, or indeed the same country, and stands about 1000 times further than that, with the distance ranging in 3 order of magnitude. Mars, on the other hand, is not on the same continent, to continue the analogy. The distance is about 250 times the distance to the moon, or about 54.6 million kilometres to put a number on it. Yeah, this is not the scale we had built our earlier equipments for.

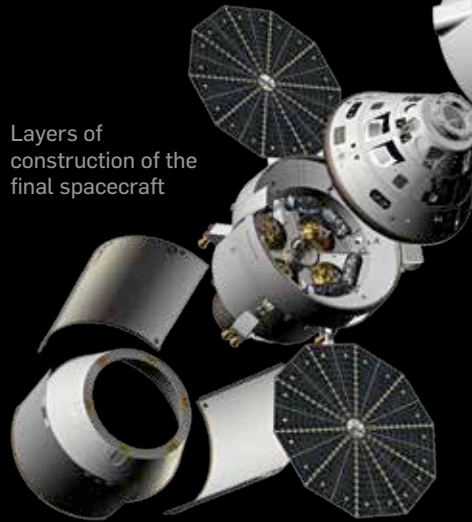
Our solution to this problem, the new and improved 'Orion' is slated to visit the next set of achievable goals in interplanetary exploration, with destinations including near-Earth-asteroids, moons of Mars, and eventually Mars itself.

The path from here

The event that was witnessed earlier last month was just a test launch for the vehicle, even if it did take a human carrier (no humans it, just the carrier) farther than

one has even been before. A lot of time and energy has gone into the overhaul of the system from the outdated Apollo specifications, and this was just an experiment to make sure that the resulting shuttle can be a viable option for a journey to Mars, and probably beyond. Here is the chronological roadmap of the project, as per current understanding.

Layers of construction of the final spacecraft



Test run (this project):

This particular run that we witnessed was just a verification that the components that have been in development for so long function properly. Officially called Exploration Flight Test 1, or EFT-1, this Orion module was built by Lockheed Martin. The final component production of the

EFT-1 Orion was completed in 2012. This was followed by rigorous internal testing to ensure quality in the build process. remainder of the craft was

The space-completed, and the entire structure was assembled under NASA's guidance and supervision. The Delta IV rocket was put in a vertical position on October 1, 2014, and the Orion module was mated with the vehicle on November 11.

Exploration Mission 1:

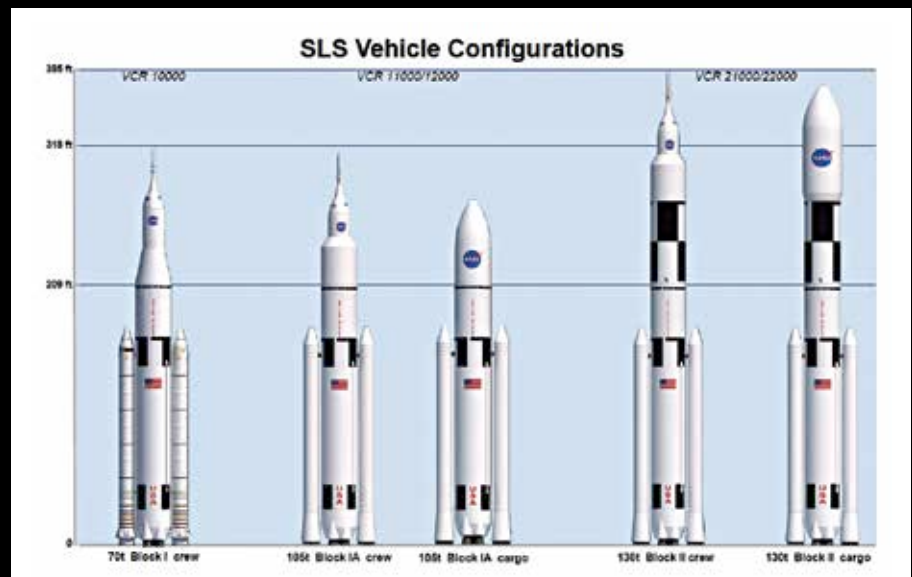
Exploration Mission 1 (EM-1) also called as Space Launch System 1 is scheduled to be the first planned flight of the SLS and the second "uncrewed" test flight of the Orion Multi-Purpose Crew Vehicle.

SLS is essentially the payload carrying heavy launch vehicle that is supposed to propel the long distance flights that humanity is planning to undertake as a part of the Orion missions from the Earth's orbit.

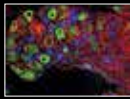
The launch is projected to occur sometime around November 2018, and the Orion spacecraft would perform a circumlunar trajectory during the seven day mission, which is to say that it will take a gravitational assist around the moon, and then re-



Orion: The first launch



The planned SLS Iterations



Detailed nerve endings

Scientists have used a technique called SNAP-tagging to produce the most detailed nerve images ever <http://dgit.in/SensoryNer>



Laser clean up

Tests are underway for cleaning rails on high-speed rail tracks using lasers by Dutch Railways <http://dgit.in/TrainLaser>

NERD WAR AMMUNITION

Of course, it is always a pleasure to know some bits of trivia about the spaceship. The next time your friends sit down for an intellectual discussion about the future of humanity, everyone should see you for the genius that you, dear reader, most certainly are.

- The total budget for the program will be north of \$350,000,000 per year of operation, which is about five times what our beloved Mangalyaan cost to put up in orbit near Mars. But considering that this one will carry and support humanity, we suppose we can understand the cost here. Although for reference, a US B2 bomber costs more than twice that amount. Food for thought.
- Your friendly neighbourhood Intel Core i7 processor is about 250 times faster than the processors used on board for this aircraft. Let that sink in – your beloved desktop is probably more computationally capable than something that is supposed to ferry humans 55.6 million kilometres and back. As interesting as that stat is, it always helps to remember the reason that it is so – all the heavy computation needed for the journey is the responsibility of Earth based computers, and the one on-board is supposed to mostly take

care of the navigation, and therefore really does not need all to sport all sorts of bells and whistles.

- The most important task of on-board computer(s) is verification of all the info that it is fed – nothing can ever cause an interruption. One of the most important parts of the avionics system for Orion is redundancy. There are twin processors in a single computer called the Flight Control Module that run in parallel, constantly checking against each other for differences. If anything is not 100% consistent actions are taken to immediately self-correct. Additional redundancy is added by having three identical Flight Control Modules (each with twin processors) running in parallel. This allows control to be switched to any of the backup FCMs if something causes one to require a reset. In the highly unlikely scenario that something renders all the FCMs ineffective there is a 5th completely different computer capable of running different code with a focus on crew survival and return functions.
- The systems make use of programming languages across almost all domains and specializations C, C++, C#, Python, Java, JavaScript, among many others. We explain these in a lot more detail for the interested in this month's FastTrack.

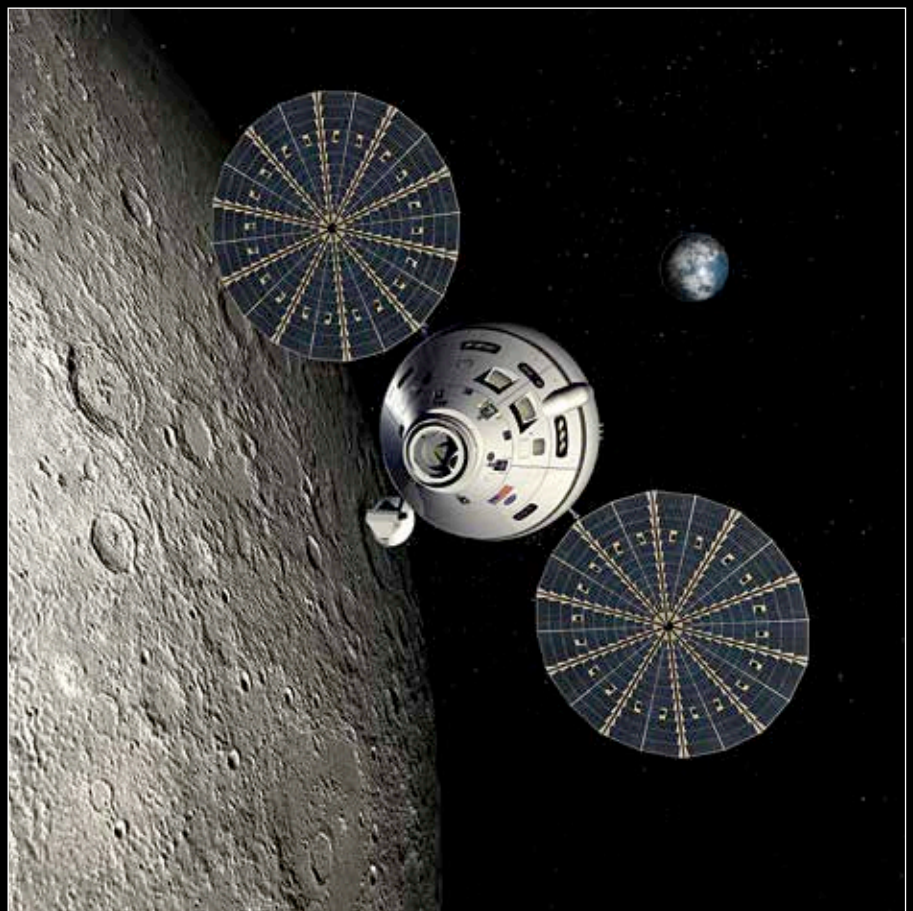
turn to Earth (yes, pretty much like what went down in *Interstellar*). It is planned to be followed by Exploration Mission 2.

Exploration Mission 2:

The continuation of the Exploration Mission series promises to be the most exciting part of the whole process. Exploration Mission 2 or EM-2 is scheduled to be the first manned mission of NASA's Orion project. This forms the core of the project that is supposed to restart manned exploration of the Solar System. With the developments and understanding of almost eight years of operation of the Orion modules, the assumption is that we should be capable of making humans reach so far beyond the Earth a reality. NASA has plans to launch it as early as 2021, taking a crew to a captured asteroid in lunar orbit. In the event this mission proceeds, it will be the first time humans have left low Earth orbit since Apollo 17 in December 1972.

Space Travel and Humanity

Space travel has had opinions divided among the general population like no other agenda. Some believe that as sentient life forms, it is imperative that we go on and explore our surroundings. Others



An artist's rendering shows the Orion crew capsule about to slingshot itself using the moon



Brain eating zombies

Ever wondered why zombies always have a huge craving for brains? This is how it started <http://dgit.in/ZombieBrain>



New smart skin

Researchers from Seoul National University develop new smart skin that could provide touch perception to temperature and moisture <http://dgit.in/ProsthSkin>

Space Age

WHAT WE GAINED BY THE APOLLO PROGRAM




To make a long story short, the Apollo series of missions by NASA were fundamental to the incredible technological leap made by humans over the course of these past 50 years. Started (allegedly) as another pawn in the Cold War race for supremacy, the program laid the seeds for much of our modern accomplishments.

By the time their activities died down, the Apollo missions had brought almost 400 KGs of moon rock onto the Earth. A large part is still stored across various laboratories across the world, and continues to be a great aid in geological, astronomical, and biological research. One of the greatest accomplishments that came from this is that scientists could finally agree on a single theory for the existence of the Moon (separated from Earth by an asteroid impact). That in turn put a lot of theories in their place and allowed us to form a good model of our understanding of the history of the Solar System, and also of the Universe. Of course, a lot of the major advances in the world of science was a by-product of the innovation poured on this set of projects. Fireproof materials, now taken for granted in most modes of long-distance transport, chemical control in water and atmosphere, water purification, pollution remediation, fuel cells, the list can go on. But the gist of the matter is that these amenities, staples of modern life due to reduction in cost by years of research, were first pioneered by programs such as this one.

All of that, and we haven't taken into consideration what it achieved in spirit. Inspiring a generation of young, aspiring minds, it convinced them that there really was no limit to what we can do. Countless scientists, researchers, and engineers attribute their initial interest into the field by the hype that went through the world when man set forth and stepped on the moon. One giant leap for mankind, indeed.

believe that we should not simply waste our time and energy (to say nothing of the resources) on such explorations while we are yet to solve the big social problems on Earth – the upcoming energy crisis, economic instability, general unrest and the ilk. Both are correct to varying degrees, former probably a little more than the latter, but both have valid points. But a very select group of people get that there is another way to look at the situation. Space is called the 'final frontier' with good reason. Innovations to conquer the constraints placed on us in space travel have fostered an astonishing number of innovations that we take for granted today. From artificial limbs to fire-fighting equipment, the range of sciences that have been touched by this pursuit is impressive.

They say one of the greatest virtues of mankind, one that has kept us physically rather unremarkable beings at the top of the planets metaphorical food chain for so long, is that we are an inherently ambitious species. We've moved far beyond being satisfied by the basic urges and necessities of life. Having conquered Earth, for all intents and purposes (unless Dolphins really turn out to be as smart as Douglas Adams said they were), it is only logical that we now look to the heavens. For years, when we had no ways of reaching them, humanity looked up to the skies and assumed that the Gods lived there, because we couldn't reach those realms. But lo and behold, here we are, ready to board the flight to the red planet.

The Kardashev Scale divides civilizations into three distinct types. We, the ones harnessing the energy of our home planet and nothing else, are the lowly Type I plebs. Type II can harness its star(s), while the final type can harness its own galaxy. Given enough time, a civilization that exists should evolve to become Type III, and yet we see none around. That is to say, there must be 'a great filter' to the jumps in type on this scale, the one that civilizations cannot cross, and are doomed to stagnate and eventually die. We're not sure if we've already crossed the filter, or if it still remains as a challenge for the future. But one thing is for certain – the pace at which we are currently moving, we most definitely are not hitting stagnation any time soon. 



By-passing restrictions

Got an ambitious building project but an old protected structure is in the way? Cantilever yours over it <http://dgit.in/RestrictBuild>



IoT (Intel) Inside

Intel is trying to provide anything an enterprise would need to set up Internet of Things implementations <http://dgit.in/IoTIntel>



"This'll teach those kids to not play Justin Beiber all day!"

MERCHANTS OF PAIN:

Non-lethal weaponry at its finest

The use of lethal force by law enforcement agencies in the west has been cause for great controversy and concern lately. Against this backdrop we take a look at how the world aims to bring on the pain but not the reaper

Elroy Desmond D'Souza
readersletters@digit.in

From crude stone axes to deadly long-range sniper rifles, mankind has come a long way when it comes to lethal weaponry. And more often than not, a civiliza-

tion's progress in terms of technology and resource gathering has always been equated with its ability to defend itself by the use of ever-evolving weaponry. But weapons need not always maim and kill. In most situations, the bad guys only need a "friendly" reminder of their mortality in the form of debilitating jolt

of pain. Enter the fast expanding field of nonlethal weaponry.

The concept of weapons designed to incapacitate by causing minimal injury is now fairly well-established. In fact, law enforcement agencies and private security organizations around the world are slowly employing a wide array of



Cat. 10 Exynos

Samsung is pushing the limits with the new Exynos chip capable of supporting Cat.10 LTE <http://dg.it.in/Cat10Sam>



Slimmest smartphone

The World's Slimmest Smartphone title gets snatched by Vivo's X5Max which is only 4.75 mm thick <http://dqit.in/SlimPhone>

From the labs

innovative, non-lethal security measures. While non-lethal weapons such as Tasers and tear gas grenades are common knowledge, we'll be looking at some of the more intriguing concepts and prototypes of non-lethal weapons from around the world.

Long-range Pain Guns

This one comes from China, the birthplace of gunpowder and Sun Tzu. With such a healthy track record, it hardly came as a surprise when a Chinese defence company recently unveiled a long-range, nonlethal weapon that causes targets to experience excruciating amounts of pain.

Known as the Poly WB-1, this hellish contraption uses millimeter-wave beams to immobilise targets that are situated as far as a kilometer away. Did that sound familiar, that would be because of a device that is perhaps present in most modern day homes – the microwave oven. The principle is the same as that by which microwave ovens function: the millimeter-waves excite water molecules under the target's skin, causing any fluids (such as blood and fat) to heat up. This results in extraordinary amounts of pain. If you've ever watched the cheese on your leftover pizza bubble in the microwave then you'd pretty much have a good idea as to what happens to your skin.

Of course, the US Military is not far behind on mobile pain guns; the Active Denial System (lovingly dubbed ADS) employs a similar method for inducing a “burning” sensation on its unfortunate targets. The American military claims the gun is not as dangerous as reports make it out to be. However, in almost all tests, subjects unsurprisingly choose not to stick around for too long when subjected to the effects of the weapon. We

can only hope that wounded and immobilized targets incapable of escaping the harmful microwave radiation emanating from the gun don't end up getting cooked medium-rare.

A Treat for Your Ears

While on the subject of weapons that cause pain, the Long Range Acoustic Device (LRAD) is more than worthy of a mention. These sound cannons are



Damn! That looks hot

capable of projecting loud and high-pitched sounds that induce pain. The device works by generating extremely loud sounds that are audible over long distances. It does this by employing numerous miniature speakers that produce the same sound via an array of piezoelectric transducers. Developed by the LRAD Corporation, this sonic weapon was initially designed to help the U.S. Navy fight off and deter pirates. Over time, more applications were discovered for its use, such as the dispersing of protesters as well some non-weaponised

uses including the amplification of recorded messages for crowd control.

Although it may seem like the safest non-lethal weapon on this list, the LRAD has its own fair share of critics. Many claim that its effects are extremely debilitating to the point where targets end up permanently losing their hearing. Similarly, there are sonic weapons that are more than just an annoying nuisance. Some can even

cause considerable damage without even making a sound. Sonic bullets, for example, can cause enough localized pain to immobilize a target and, in some cases, cause eardrums to explode. Talk about getting an earful.

Another amazing contraption in the same ilk is the “Thunder Generator”—a sonic cannon that was originally developed by Israeli farmers as a cost-effective deterrent against birds. The device detonates a fancy mix of petroleum, air and cooking gas to generate a series of extremely short shock waves that can

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A 3D printed dress might not seem possible but here's someone who's done it
<http://dgit.in/3DDressPrint>



Wakie Wakie

Wakie is a new app that lets users within the user base wake each other up by calling them
<http://dgit.in/AlarmWakie>

traverse a distance of up to 100 feet. Although its application is nonlethal, if used at a distance of less than 10 m, the shock waves can cause permanent damage or even death. If you're ever visiting Israel and you see one of these beauties, make sure to give it a wide berth, lest you wish to get cooked like the poor birds unfortunate enough to get hit in close proximity.

Get Bedazzled

No write-up related to weaponry would be complete without mentioning the American Military multiple times, and as expected, they do not disappoint. Say hello to the PHASR, aka the Personnel Halting And Simulation Response rifle. With a design straight out of a sci-fi movie, the PHASR is a laser dazzler-type of non-lethal weapon, which is intended to disorient targets by temporarily blinding them using a directional twin-wavelength laser beam of high-intensity radiation.

The PHASR has been designed primarily for perimeter defence and can be used to incapacitate large crowds. Furthermore, since the 1995 United Nations Protocol on Blinding Laser Weapons banned the use of weapons that cause permanent blindness, the makers of the PHASR tweaked their product to ensure that it skirted the guidelines set by the UN. Should you ever find yourself at the business end of this fun toy, you can rest safe knowing that the feeling of your eyeballs turning to mulch is just a temporary thing (hopefully).

Life's a Blast

When you think of explosives, "non-lethal" is probably the last adjective to pop into your head. Thanks to science, however, we can now blow people up just the right amount to cause excruciating pain while still keeping them alive. Take these innovative sting-ball grenades for example. Designed for crowd control use in prisons, these grenades differ from traditional ones in that they are made almost entirely of rubber. On impact, the rubber casing on them bursts and the grenade expels about a hundred rubber pellets that can maim and bruise like getting hit by hundreds of BB pellets.



It comes with a DIY ammo kit. The last alternative for a weekend project with the kids.

To add some more flavours, a few variants of these sting-ball grenades have a flash bang effect built into them: they can eject a bang of up to 160 dB (a jet engine taking off at about a 100 feet away is approximately 140 dB) and a light

output of 6–8 million candela. It goes without saying that it would be best to not look directly at the flash if you are ever unfortunate enough to find yourself in its blast radius.

Sting-ball grenades have now become commonplace in prisons across North America. They are relatively affordable and highly effective. However, they still remain a highly unethical and unsafe means of crowd control. Especially, since at any time, a stray rubber pellet might end up blinding an inmate. For now, the best way to avoid these dangerous non-lethal grenades would be to stay out of its way.

DID YOU KNOW?



ECO-FRIENDLY NONLETHAL WEAPONS

The Indian military has developed its own non-lethal weapon with a classic Desi twist. Using one of the world's hottest chillies – the "Bhut Jolokia" – they have designed a tear-gas hand grenade that can be used for incapacitating suspects. Its main applications are to deter gatherings of large mobs or to flush out terrorists from hiding spots.

The Invisible Pain Fence

Ever played a video game in which an invisible force field vaporizes any unauthorised personnel who try to pass through it? The Portal Denial System (PDS) takes this concept and brings it one step closer to reality. It uses a laser-induced plasma channel to deliver a surge of electricity, similar to that of a Taser. It does this by emitting a laser beam into the air that ionizes surrounding gasses to form plasma. This plasma can deliver a seriously debilitating electric shock when the proper voltage is applied.



Self-stirring pot

Stirio is an expandable blade that sits on any pot and stirs on its own for a full hour on a single charge <http://dgit.in/Stirio>



3D Bionic Eye

Princeton's 3D LED printer integrates quantum dot LEDs with contact lenses to project beams of coloured light <http://dgit.in/Bionic3DEye>

From the labs

Although PDS is designed to be non-lethal, the method implemented to deliver the electric charge can be tweaked to the point that it can deliver up to 10,000 volts of electricity, enough to fry a large dog. Developed in 2007, the system is currently deployed in military buildings across the US. Fortunately, plans to make this device available for civilian use never materialized.

Personal Projectile Launcher

The ARMA 100 is probably the most easily accessible non-lethal weapon on this list. It is a handheld projectile launcher capable of providing just the right amount of nonlethal force to injure an attacker from a distance of up to 20 feet away. The idea behind using this amount of force is that it can give you enough time to escape without the need for anyone to resort to deadly force. Approximately the size of an air gun, it uses single-shot gas cartridges for propulsion and has an effective range of up to, you guessed it, 20 feet.

The gun uses a custom bean-bag-type projectile that if fired at a vulnerable spot, such as the stomach or head, can cause a good deal of damage to the target. It weighs around 1.5 lbs with a barrel length of 10 inches and requires a basic knowledge of gun handling to operate. The ARMA 100 is a relatively safer option for those inclined towards purchasing a viable self-defense device for home. Furthermore, it is legal to use without a license (in the United States) and can be purchased without a background check.

Shock and Awe

The name Taser is now synonymous with non-lethal weaponry. So much so, that any generic electric gun is simply referred to as a Taser—not unlike how all photocopiers are referred to as Xerox machines. Taser guns now come primarily in two flavours: the smaller version that most law enforcement personnel roam with is the X26P. The original model (X26) developed in 2003 featured a gas tube spark gap and fixed discharge energy, whereas the new one features the ability to keep a log of discharges, as well as an advanced digital



Law and Order: Shocking Victims Unit – “But officer, I paid for these donuts!”

display and extended battery. Then there's the X2, which is water-resistant and features dual lasers that improve accuracy.

Both these models, however, look like a child's toy in front of their (now discontinued) bigger brother, the X12. This 12-gauge shotgun fires Taser XREP cartridges (i.e., Extended Range Electronic Projectiles) up to a range of 100 feet. Like the X26P, the projectiles of X12 are “self-contained, wireless projectile(s) that delivers the same neuro-muscular incapacitation bio-effect,” which in plain English translates to “a very painful electric shock.”


Being in the weapons industry, Taser is no stranger to controversy. In fact, their products have not always proven to be “non-lethal”; some critics have claimed that Taser rounds are capable of inducing cardiac arrhythmia in targets, eventually leading to a heart attack and instant death. Every year, reports crop up listing police brutality with many incidents involving unsolicited use of taser guns. It is obvious that even though the taser gun is marketed as a non-lethal weapon, it is extremely important that its use be regulated. Proper training for its users cannot be understated.

Cloudy with a hint of chemicals

We were bound to come across a highly controversial weapon developed by

the US military sooner than later. The XM1063 is the codename for the US Army's new secret non-lethal weapon. The development of the weapon was overseen by ARDEC, the US Army's Armament Research, Development and Engineering Centre.

Details about this mysterious weapon are still rather murky. Many reports have stated that it is an artillery weapon that shoots a projectile which delivers a payload containing a concoction of chemicals devised to immobilize and incapacitate targets without killing them. The projectile is fired using a 155 mm howitzer that has a range of 28 km. As the payload parachutes down towards the designated target, it releases the toxic cocktail over an area of effectively one acre.

Nobody is still entirely sure about the exact nature of the payload, although there are numerous speculations about it. Some experts claim that it may contain a type of riot-control agent, similar to that seen in tear gas grenades and pepper sprays. Others state that it could simply be a malodorant (such as a super-powered stink bomb) or an anti-traction agent that makes the target area extremely slippery and impossible to traverse. It is possible that we'd see the application of this weapon in anti-terrorism operations to incapacitate and capture targets. 

Win at tweaking!

Get the most out of Android 5.0 Lollipop and your good old Laptop by following these simple tricks.

Win at troubleshooting!

Whether it's a software niggle or a hardware nightmare, we show you how to win at troubleshooting like a boss.



Safeguarding your gadgets and data

Gadgets are always at a risk, be it theft, data fishing or just an accidental drop. We take a look on how you can lower this risk via preventive measures and apps.

Hardik Singh
readersletters@digit.in

In today's world our gadgets have become such an important and integral part of our lives that we won't let them go out of our sight. And if, by chance for some reason we do, we remain in a state of anxiety until we reunite with them. So, how to get some peace of mind in situations like these, here are some apps and measures to get you sorted.



OMG! Where's my phone Android Device Manager (Android)

Android Device Manager is a basic and simple tracking app from Google. The app keeps track of all your connected devices. It lets you remotely "locate" and "lock and erase" your Android smartphone. This feature is also baked into the phone's setting and could be enabled via Google settings. Once enabled, you will be able to track

and lock your device remotely by simply going to <https://www.google.com/android/devicemanager> in your web browser on your PC.

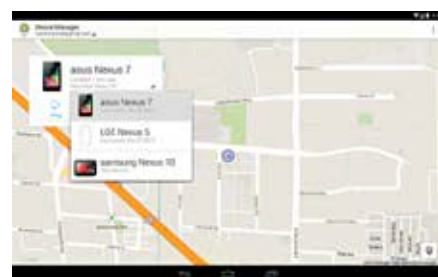
In case you have lost your phone nearby you can remotely activate the ringer of your phone which can attract attention and help you locate it easily. And if all your efforts to find your device still go in vain, you can remotely backup and wipe your phone's contents.

Find my iPhone/iPad and Mac (iOS)

Just like Android Device Manager Apple also has in-house device finding app cum service which works via your iCloud. This service can be easily activated from iCloud setting in your Apple device.

Now if you lose your device you just have to enable the find my iPhone feature from <https://www.icloud.com/>, the registered device will go in lockdown and would require your Apple id and password before anyone could turn off the find my iPhone feature, erase your device or reactivate it.

You can also initiate a remote wipe on your Apple device which will reset your device to its factory settings. But the good thing is the find my iPhone feature will continue to work even after the device has been erased, it



would continue to display your customized message.

Prey (Windows, Linux, Mac, Android and iOS)

Prey is a third party multi-platform app which supports Windows, Linux, Mac, Android and iOS. You can add up to three devices on a basic free account. The app provides tracking, remote locking, triggering a loud alarm and customized messages which would be displayed on screen as standard and adds up a couple of other

features as well. The app can take pictures of its surroundings via front and rear cameras and can resist un-installation.

You can add more features to this app when you update your basic account to a paid account. The Paid account of this app will let you track unlimited number of devices. You can avail real-time on-demand



Win at PC Maintenance!

Even your PC needs some tender love and care. Learn how to maintain it for smoother operation.

reports sent with SSL encryption. Your device will keep leaving “last-locations” so that you can track it down and also help local law authorities in helping you do so.

Lookout (Android)

Lookout is yet another app for your Android smartphone ecosystem which helps you keep track of your beloved device. This app has a built-in antivirus which keeps a check on viruses, malwares and spywares. Features like Smart Dialing, scans numbers for potential dialer related threats.

Apart from added features the app covers the basic features an anti-theft app should have like “Find my phone” and “signaling the last known location”. You can also backup your contacts and important data remotely in dire situations.

Features like Backing up photos, device lockdown, remote wipe, safe browsing and privacy advisor are available only if you buy the premium version of the app. The premium version of the app also includes a feature which clicks images via the camera of the smartphone and then emails you the pictures.

Cerberus (Android)

Cerberus is one of the most feature rich anti-theft apps you can buy for your Android device. The app is free to install from the play store and comes with a one week free trial period. The usual features like remote lock, wipe and alarm are included but the functionality of this app runs further and deeper.

You can lock the device with a SMS and the app supports SMS commands and offer remote control services even when the data is turned off. The app will provide call logs and SMS logs which can help you to track your device down easily. This app can also take pictures and even record sound of its surroundings which can further help you or the authorities in locating your device.

Since this app is open source users with rooted phones can embed Cerberus directly in the root of the phone, which means that the app will be able to survive data wipes.

Apart from these recommendable apps there are plethora of similar apps you can go through and use. Apps like Android

lost, GadgetTrak, etc offer all the general anti-theft features but with one or two features missing.

Private Matters

Ok, now you have secured your phone from getting lost. Great! What what about data theft? Are you safe from phishing emails, data-leaking apps, data-hungry social media websites/apps or just prying eyes? Privacy is an hot topic in current times with ongoing debates on net neutrality. This post-snowden age has made us think about social media. Internet's filter bubbles are playing a major role in making our private life, a more public one.

Well let's just dig into it because in this smart world every solution is miniaturized in an app and we take a look at what the android and iOS marketplace has to offer when it comes to respecting your privacy. We will go through some important encryption softwares you can use on your PC.

Telegram (Android, iOS)

From the looks of it, the Telegram app looks like WhatsApp with a bluish color scheme but the app is more than that. This is one of the most popular encrypted messaging services, with client-server encryptions for standard chats. The app also offers secure-chat modes with end-to-end encryption so that you and only your recipient would be able to read it. Telegram also features self-destructing messages which disappear from both phones after some time.



RedPhone (Android)

RedPhone is a free open source app via which you can place encrypted voice calls to other RedPhone users over a data connection. It works over your standard phone dialer and if the contact on the other end

Win at discovery!

The digital age has ushered in a new era of discovery, an age where just about every niche is catered for. You have to be at the top of this game.

also uses this app, you will get an option to call the contact via RedPhone on a secure encrypted line.

Wicker (Android, iOS)

Wicker is a secure and encrypted messaging service just like telegram but it takes the secure and anonymous part much more seriously. The app deletes all metadata like location, network information, timestamps, etc. The app also features self destructing, text, pictures and video messages. The secure shredder included in the app erases all data attached to prevent recovery.

SpiderOak (Android, iOS)

If you want to securely save your data on a cloud storage system, SpiderOak is the



app / service for the job. You can avail 2GB of free storage which is fully encrypted and only you can unlock it with your password since SpiderOak doesn't save your password. SpiderOak provides extra space as well but then you have to pay for it on a monthly basis.

NumberCop (Android, iOS)

NumberCop is a spam blocking app which blocks pesky calls and spam messages. It keeps checking for unknown callers, messages and senders or suspicious links and files them with NumberCop servers. This in turn help other NumberCop users to stay clear of these unknown numbers as well. The app also features whitelist and blacklist features.

Spybot Search and Destroy (Windows)

Spybot does what the name suggests that is searching and destroying spyware apps. It is a dedicated spyware eliminating

Win at taking better photos

From understanding your dSLR better to using everyday tools and apps to take better pictures, we reveal all.

Kodak Android phone

Kodak will be unveiling a new Android smartphone at the CES 2015 event. Are they too late?
<http://dgit.in/KodakPhone>

app which catches spywares in your PC including pesky tracking cookies. The App also keeps your PC from getting infected in the first place.

Malwarebytes anti-malware (Windows)

Malwarebytes is a simple must have anti-malware tool. The heuristics engine in this software makes it quite efficient and speedy. It is capable of determining dangerous apps and malwares quite efficiently. The software is easy to install and the interface is quite easy to use and well-organized. The software does have some extra features but they require you to pay and upgrade it.

Truecrypt (Windows)

Also known as THE solution to encrypt your personal files and folders, TrueCrypt is a free open-source disk encryption tool for all your file encryption needs. The software includes various algorithms by which you can encrypt your files. You can encrypt a file, a folder, a drive or a whole partition via this software. It can also be used to encrypt a USB flash drive.

Enigmail (Windows)

Enigmail is a tool you can use to encrypt your emails. It is actually an extension for Thunderbird and SeaMonkey which encrypts your emails and keeps it safe from prying eyes of internet and mail service providers. The tool does have a slight learning curve and would require you to go through the installation guide on its website. But if you deal in data sensitive emails, Enigmail should do the job.

AdBlock Plus (All major web browsers)

AdBlock is a free extension which is available for majority of web browsers. Once installed, AdBlock runs silently in the background blocking all advertisements, even the hateful pop-up ones.

AVG LinkScanner free edition 2015 (Windows)

Earlier AVG LinkScanner was part of the AVG anti-virus suite but AVG has now made it a standalone software. What this basically does is, when you search some-



thing in your browser, it will give you a red and green flag next to a unsafe and safe link respectively. All you have to do then is, stay clear of the red flagged links.

Don't forget to use protection

Your theft issues have been taken care off, your privacy issues have been resolved, now let's get physical. No matter what phone or tablet you own, no matter what laptop is in your backpack or in-front of you for that matter, you would require some protection.

Plastic cases (phone)

Lets' start with something cheap and practical. Plastic bumper cases as we know it are available across all major street markets and numerous e-commerce websites. They start at as low as Rs. 20 and a fine printed plastic case can go upto Rs. 200 but they serve only two purposes, which is to save your phone from an accidental drop and add a little more grip-ability (ahem! iPhone 6). Beyond that you should be looking at more robust options for your handheld devices.

Rubber cases (phones)

Rubber bumper cases are just a better option over the plastic cases. They are better at absorbing drops and add even more to the grip-ability quotient. But the thing is rubber bumper cases wear and tear off very easily and is susceptible to stickiness after some time.

Flip covers (Phones and tablets)

Samsung's Note series may have started the flip cover trend but now you can easily get a flip cover for any smartphone.

Flip covers give an all round protection to your handheld device. These are now available in various materials and designs. The magnetic iPad covers is a great example of how a simple cover can add usability with protection. The flip covers continue to evolve with HTC's M8 Dotview case and LG G3 Quick circle flip cover.


Rugged cases (Major phones and tablets)

Rugged cases are your best bet to protect your phone or tablet from drops and mis-happenings. These cases can take a beating and still protect your phone. These cases use materials like silicone, Aluminum, polycarbonate, etc. The G-Form XTREME case iphone 6 case takes its job way too seriously and is built from a customized titanium alloy.

Screen protectors

Cheap screen protectors are not hard to find but good screen protectors come at a steep cost and are not available easily either. A good screen protector will take upon all the scratches on behalf of your screen. Nowadays you also have choice of tempered glass protective screens which gives a better protection overall over the polyurethane screen protectors.



Laptops don't have that luxury of being pampered by high end cases or covers but what you can get instead are, basic and fancy vinyl covers for your laptops. They come in plenty of designs and are easily available. They hide the glossy or plastic back of your laptops and add much needed grip to it. Another useful addition to your laptop is a keyboard skin which will help you keep dust at bay. 

ANDROID 5.0 LOLLIPOP

Android 5.0 Lollipop is out and has already found its way to most devices either by side loading it or by the official OTA route. The new iteration of Android introduces the all new "Material Design" look and feel, featuring lots of animations, creating an entirely new Android experience. Compiled with a glut of features, it's the best iteration of Android yet. If you have it running on your device check out these tips and tricks to get the most out of it.

Make use of different user accounts

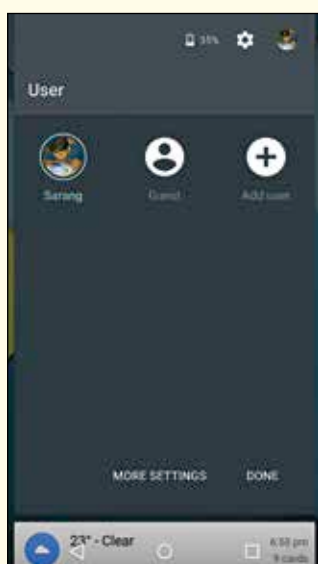
Lollipop has added the multi-user support to smartphones as well. There are three built-in accounts, which are: User account, Guest account and Profile account.

User account: This is similar to an administrator account. The phone owner will control it. The system settings made in the user account will be automatically reflected in the other accounts.

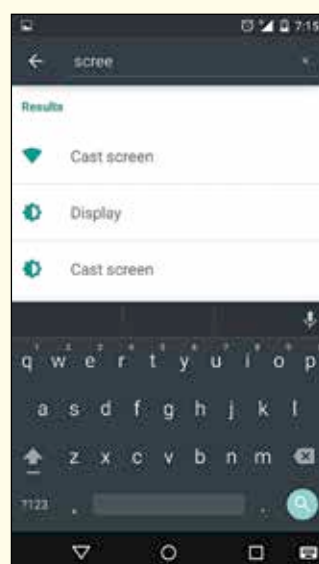
Guest account: The guest account is similar to the

Chrome's incognito mode. Data generated, sent, and received during the guest session is temporarily stored.

Profile account: The profile account is the account without admin privileges. This is ideal for a secondary user of the phone. You can limit the access to apps and services for these users. Also very handy when you want to show off your phone but don't want people snooping on your photos or mails.



Quickly switch to guest user from Quick Settings.



Directly get the setting you are searching for



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Supercharge your laptop	02

{ Tips & Tricks has its own page numbers, and does not follow the rest of the magazine's page numbers. This is done to ensure that you can cut out and save T&T in a separate folder for later reference. }



Head over to Settings > Users to enable guest account or to add different accounts. To switch between accounts go to Quick Settings and select the user you want to switch to.

Play Flappy Android

This little Easter egg in Android 5.0 Lollipop is inspired from the now famous game - Flappy Bird. To access it, go to Settings > About > repeatedly tap Android version line > long press the Lollipop that you'll see on the screen to launch the easter egg.

Access Quick Settings

The notifications panel in Lollipop is just the tip of the iceberg,

hiding several shortcuts. These will save the time you spend in navigating through the menus otherwise. The notification panel (one-finger pull) can be expanded further by pulling it down with another swipe. Voilà you have your shortcuts!

Double tap the screen to wake

Instead of pressing the power button you can double tap the screen to wake your phone.

Google borrowed this neat feature from other manufacturers and made it its own. However, it requires hardware support and hence would work on only those phones that have the compatible hardware.

Search within settings

Going into the settings apps and finding the right one located within the submenus can be tedious right? To deal with it, Google has added a search option within the settings. It's fast and easy if you know what you are looking for.

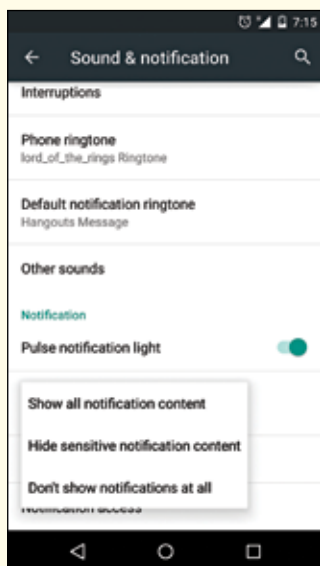
To search, go to Settings > tap the magnifying glass icon > start typing.

Set a metered Wi-Fi network

Like your cellular data, you can now set your Wi-Fi to be metered as well so that it will restrict background data and give warnings for large downloads. To set Wi-Fi network as metered, go to Settings > Data usage > Network restrictions and set Wi-Fi as metered. Metered Wi-Fi will come handy while tethering and when using Mi-Fi hotspots (if you find any that is)

Restrict the information revealed in notifications

The notifications appearing on the lock screen might reveal



Hide content from appearing on the lock screen

sensitive information that you don't want others to see, say for example WhatsApp messages. Lollipop offers a way to present the notification in a way that will hide its content on the lock screen. This feature will only work if you have a PIN or pattern protecting your phone.

To enable PIN or pattern lock go to Settings > Security > Screen lock and then set up a PIN or pattern. That being done you'll be asked if you want to hide sensitive information - tap "Hide sensitive notification content".

If you have already enabled screen lock you can directly turn on the feature by going into Settings app > Sound and notification > under Notification heading tap "When device is locked" and select "Hide sensitive information content".

To make an app sensitive, go to Settings > Sound and notifications > App notifications > turn on the Sensitive toggle. This Sensitive switch will only appear if Android is currently configured to show all notification content, so you'll need to manually flick the slider for every app that you want to hide.



Make use of the Priority mode

Lollipop offers a new mode called Priority mode. When in priority mode, only the apps marked as "high priority" will be allowed to alert you. To mark an app as a priority app, go to Settings > Sound and notifications > App notifications. Here you can either block an app or choose to set particular apps as priority apps. Apps that are given this elevated status will always have their notifications at the top of the list and will be able to bug you when the device is set to priority mode.

To activate Priority mode, press volume up or volume down key then tap Priority on the screen and select Indefinitely or finite amount of time.



Try the "Do Not Disturb" mode

In addition to the Priority mode there's a Do not disturb mode, which unlike the Priority mode, is centered around the time of day rather than specific apps. To activate Do not disturb, go to Settings > Sound and notification > Interruptions and choose the days, start time and end time.



Bring the app card forward and click on the pin button to pin an app.



See your battery percentage

Android Lollipop doesn't list the battery percentage on the status bar. However, you can see it in the Quick Settings. Just open the Quick Settings and the battery percentage is listed there.



Pin an app such that you can't close it

Screen pinning is a new feature that lets you run a single app all the time in such a way that it can't be escaped until you perform a button press combo and/or type your PIN. App pinning comes very handy when someone borrows your phone or if you want to give it to say your little nephew who wants to play a game. Don't want the little one to be confined to temple run? Simple pin that app to your screen before handing it over.

To enable screen pinning, go to Settings > Security > Screen Pinning > set it to "On".

To pin an app, go to recent apps drawer (by pressing the square button to the right of the Home key) pull the app up to see its entire thumbnail, then tap the pin icon at its bottom right.

To unpin an app, press Back and Overview button (square button to the right of the Home key) at the same time. You'll be asked for a PIN if you have PIN set up.



Unlock with Bluetooth

In Lollipop you can set up a bluetooth device as your phone's key. This being set up, your phone will stay unlocked when that particular device is present in the vicinity and paired.

To set it up, first, pair your Bluetooth device, then go to Settings > Security > Smart Lock. Enter your PIN and tap "Trusted devices", hit the plus icon, select "Bluetooth" and choose your paired device.



Use the built in flash light

Flashlight is (finally) integrated into the system directly. You don't have to rely on the third-party apps anymore. To turn on the flashlight, go to Quick Settings (two finger swipe from the top) and you'll find the flashlight toggle there.



Check out face unlocking

You can also use face unlocking method to unlock your phone. It's not new but the one offered in Lollipop seems better implemented. To enable it, go to Settings > Security > Smart lock and enter your PIN, then go to Trusted Face > Setup, and follow the instructions given.



Turn on battery saver mode

Project Volta has lot to offer in Lollipop. Google says you can extend the battery life by up to 90 percent by using the battery saver features. There's a built in battery saver which is automatically turned on at 15% or 5% battery. You can also switch it on and off manually. To enable battery saver, go to Settings > Battery > tap the Menu button > select Battery Saver.

Then set whether to turn on automatically at 5% or 15%. If you want you can manually turn it on.

SUPERCHARGE YOUR LAPTOP

With the strides taken in software and technology, portable computing devices such as laptops and smartphones have become indispensable. In fact, laptops are almost entirely starting to replace traditional desktop computers in both homes and offices. It makes perfect sense, therefore, to ensure that your laptop is consistently running at an optimum level.



Below are a few tips and tricks to boost your laptop's performance while also improving productivity and – to a certain extent – battery life.

Install an SSD

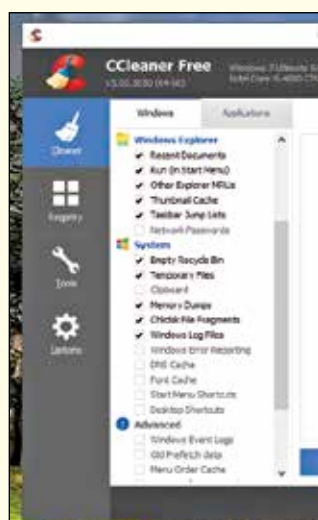
Upgrading to an SSD from a run-of-the-mill HDD is arguably the most noticeable upgrade you can make for a smoother UX and improved overall computing experience. Even an entry-level SSD, when compared with a high-performance 10,000 rpm HDD, has a markedly faster response time (up to over 30 times faster) as well as faster sequential and random read-write operation times. Loading your operating system, applications and games from an SSD can result in up to 200% faster startup and loading times. This faster operating time leads to more disk idling, which results in a slight improvement in battery life. It doesn't hurt that SSDs have no moving parts either, resulting in protection from bumps and even more battery life.

In the past, these devices might have been looked upon as a slightly hubristic upgrade, especially considering the ridiculous price per gigabyte. However, these days you can grab an affordable 240 GB SSD for as low as ₹8,000. Those looking for a more affordable deal can opt for a 120 GB drive (~₹4,500), which should be sufficient to store your OS and important applications, as well as a few

games. Any media that you want to store would of course be better off on your portable HDD.

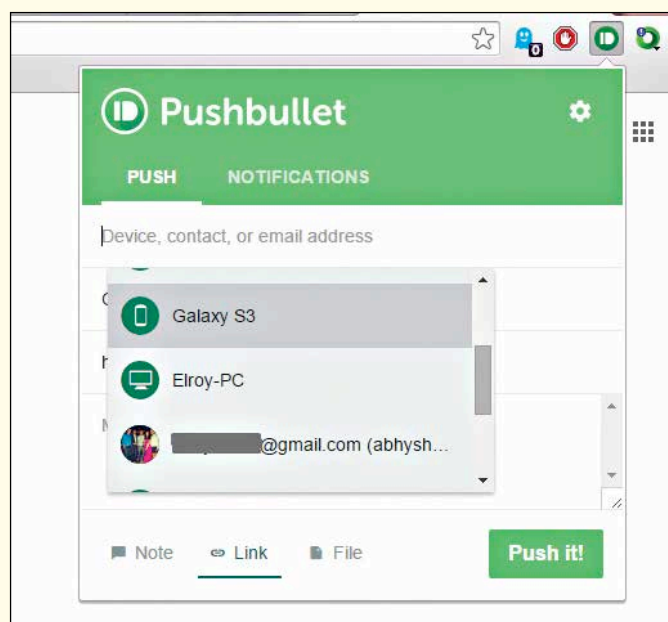
Upgrade RAM

Today, with applications getting more memory intensive (we're looking at you, Firefox), adding additional RAM has almost become an inevitable upgrade. Most laptops now come with minimum 4 GB RAM, expandable up to 8 GB. While 4 GB would have been sufficient for regular usage, those using graphic designing and image editing applications like Maya, Coreldraw and Photoshop will see a definite improvement in performance after upgrading to 8 GB.



Customize your cleaning needs

Laptop RAM is now extremely affordable, with a 4 GB kit setting you back by just ₹2,500. Ensure that you check the total number of RAM slots (standard laptops come with two slots) as well as the number of free slots: for example, if your laptop comes with 4 GB of RAM and it mentions "expandable up to 8 GB," then your laptop is most probably loaded with a single stick of 4 GB RAM. You can verify this with a tool like CPUZ that will give you a detailed explanation of the type of RAM on your system, including the number of free slots.



Push links and images to your devices or those of a friend

Use a Laptop Cooler

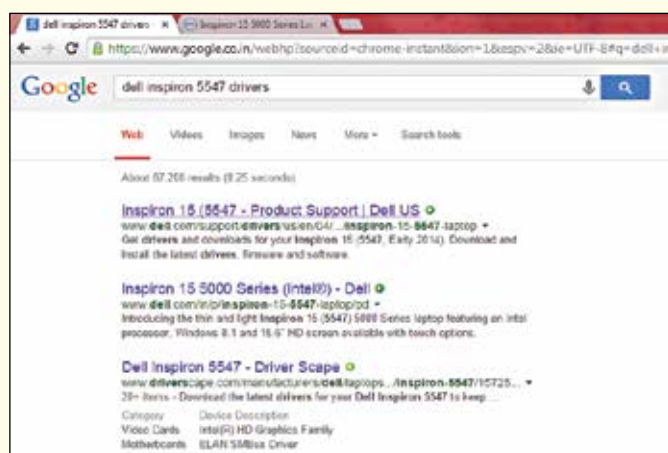
While laptops these days come with much improved cooling systems, countless laptops in the past have been lost to overheating owing to dust accumulation and unsolicited overclocking. An ideal solution for this is the use of an external laptop cooler (a.k.a. "cooling pad") which also doubles up as a convenient resting surface for your laptop during use in bed.

There are two types available: an active cooling type, which is powered via USB and either draws hot air away from the laptop or pumps cool air towards it, and a passive cooling

type that uses a type of organic salt compound to absorb excess heat. Cooling pads come in a variety of sizes to correspond with that of your laptop and start at an affordable rate of ₹800 and go up to ₹5,000 for premium brands.

Install CCleaner

A major culprit of decreased system performance is the accumulation of temporary Internet files and redundant application data. CCleaner is an easy-to-use application that aims to clean such virtual gunk that gradually builds up in your storage. You can customize its settings



Google your laptop name for a link to its support page



to ignore certain applications and/or file types, and it is also an easier means to delete private data such as history and cookies from multiple browsers with a single click. Besides that, the application lets you disable programs that automatically boot with your OS, thus helping you manage resources better for smoother performance.

CCleaner has a built-in application manager that lets you rename and uninstall applications, as well as a drive cleaner tool that lets you securely delete files preventing any chance of recovery using file recovery tools. The app also includes a windows registry cleaner. However, the boost in performance from this is minimal and is almost not worth the risk of accidentally deleting crucial registry values. Use this particular feature with caution.



Integrate with Pushbullet

Unlink the other tips on this list, Pushbullet is not a performance-boosting tool. However, it does help increase productivity, especially in tasks that require you to switch between multiple devices such as your laptop and mobile phone. It allows you to mirror notifications from your phone to your laptop, as well as reply to text messages. Furthermore, you can push text, links, and images between your phone and laptop, opening the door to a wide array of applications.

For example, if a friend sends you a link on a messaging app like WhatsApp while you are using your laptop, you can push the link to the Pushbullet app (or browser extension, depending on your OS) and view the content on a larger screen instead of your phone. Similarly, if you want to share some text or a link with a friend via the same messaging app, simply push

the text/link to your phone. The potential applications are endless.



Check for Driver Updates

Updating outdated hardware drivers especially important if you have a laptop that is over three years old. Device manufacturers keep releasing updates to drivers for integrated devices such as your on-board graphics card and motherboard chipset, which includes drivers for your sound device and LAN adapter. You can find updates for your laptop's hardware by visiting



A 4GB USB drive should suffice for ReadyBoost

the manufacturer's website and searching for the support page for your particular model.

In the case of chipset drivers, updates are far and few between and most do not contribute any noticeably significant performance boosts. Hence, it is recommended that you only update these drivers if you are experiencing hardware issues. However, if your laptop comes with a dedicated mobile graphics card, ensure you are always on the latest version of drivers as these drivers are updated often and include significant performance upgrades, especially for new games that require driver optimization post release. In short: driver update equals slightly increased frame rates.



Get an external WiFi Adapter

Seeing as how a laptop is primarily for wireless use, wireless internet is nothing short of an indispensable feature. Therefore, it's imperative to ensure that your WiFi connection is running at its optimal setting, and there are quite a few measures you can take to improve connection strength and stability. First and foremost, upgrade to a wireless-n or wireless-ac router if you are still using a wireless-g one. This helps you gain improved internet speeds (limited to that given by your ISP of course) as well as faster transfer of data via local wireless intranet, ideal for streaming media (Chromecast users take note). In addition, AC devices have a much improved net battery usage if connected to a wireless-ac network

Alternatively, you can upgrade the PCI wireless receiver in your laptop or simply plug in a USB antenna receiver for improved reception. The physical antenna on the USB receiver will help you capture signals in places where you would earlier encounter WiFi dead zones. Beginners should note that installing a new PCI card on your laptop will take some homework as you have to open the laptop's back case.



Make use of Windows ReadyBoost

Users who have their laptops equipped with Windows Vista or better can make use of Microsoft's proprietary ReadyBoost feature, which improves memory-based performance (application switching, response times, etc.) on older systems with less RAM (1 GB or 512). Using the feature is as simple as plugging in a USB pen drive, right-click it in "My Computer," select "Properties," and click

on the "Dedicate this device to ReadyBoost" option.

Note that not all USB devices support this feature; Windows will allow you to test the drive before you can assign it as a ReadyBoost device. Some manufactures have even begun to add the "Enhanced for Windows ReadyBoost" tagline for their products, indicating that the device has been tested by Microsoft to confirm ReadyBoost compatibility. ReadyBoost will exhibit some improved performance during non-sequential read-write operations as flash drives are faster during non-sequential reads. Don't expect a lightning fast solution to your RAM woes, but whatever little performance boost you get may be worth it.



Consider Switching to Linux

If you use your laptop primarily for browsing the Internet or watching movies, there is a possibility that switching to a lighter, relatively safer operating system such as a Linux build will significantly improve your UX experience. Gamers will have time switching to a Linux build because most modern day games are only available for Windows. First time Linux users should try either the Ubuntu or Fedora build for a good-looking, hassle-free distribution.

Most Linux distributions such as Ubuntu and Fedora are free to download, so you can have little complaint about the cost. Installation is also easy: burn the ISO for these distributions on to a DVD or load it on a USB drive using ISO-burning software such as "Universal USB Installer." Linux is generally much lighter on system resources, which can directly help improve battery life and performance.

Agile UAVs coming!

DARPA has created the Fast Lightweight Autonomy program to build agile UAVs, taking inspiration from the flight of birds of prey <http://dgit.in/DARPAUAV>



Fingers at work

Researchers have found that using smartphones are changing the way the fingers were meant to be used, perceived by the brain <http://dgit.in/PhoneFinger>

Q&A

Win at troubleshooting

Providing tech support like a boss...

New SSD or more RAM?

Hello Digit! I have an ASUS G750JX laptop from the ROG series. I'm a gamer and I love to play single-player as well as multiplayer online games. The specification of the laptop are as follows:

- Processor: Intel Core i7-4700HQ @ 2.4GHz;
- RAM: 16GB DDR3;
- GPU: GeForce GTX 770M

I was wondering whether an SSD or 16GB of RAM would be worthwhile in terms of performance?

-Prithvi Bhambri

A Since your laptop has a really good configuration while already having 16GB of RAM installed, it would definitely be much more wise to buy an SSD. Although your laptop supports upto 32GB of RAM, 16GB is more than enough for playing current games at the highest settings and so you're better off investing money into a SSD. As you don't have budget issues, you can go for something from Samsung's stables like the 250GB 840 Evo or even the new 256GB 850 Pro which are available for Rs.8,799 and Rs.12,299 respectively. Even SSDs from the SanDisk Extreme Pro series are a good option to consider.

Are TV Tuners any useful?

I recently bought a nice 50-inch Full HD LED TV and I've almost started building a HTPC for use with the TV. I have a spare ZOTAC IONITX-E-E Intel Atom 230 Mini ITX motherboard and so I plan to use that for the build along with Arch Linux as my preferred choice of OS for the HTPC. I was thinking about getting a TV tuner card for getting basic TV channels on the PC, but I don't know how it works or would it even be of much use to me. Please advise what should I do.

-Amish Soni

A Basically, a TV tuner card takes a video signal from a cable, antenna or any other source and let's you view or record it on your PC. A decent digital TV tuner card

is mated to a HD over-the-air antenna connection will allow you to use your PC as a Digital Video Recorder (DVR) for locally available channels and so you'll be able to record content to your PC directly. As you'll be using Arch linux as the OS for the HTPC, you should head over to www.mythtv.org in order to get MythTV which is an excellent open source DVR software with plenty of options to choose from. If you get stuck while setting up MythTV, just head over to the website where you'll easily find an easy step-by-step setup guide for it.

Stupid .DLL files

Hi Team Digit. I recently started seeing an error on my PC. Every time I turn on the computer, a window opens up with a Run DLL error telling me that: There was a problem starting C:\Users\PC\AppData\Local\Conduit\BackgroundContainer\BackgroundContainer.dll

The specified module could not be found. I press the OK button and continue working on the PC, but I would really want to know a way to get rid of this issue for good. Please help.

-Neeson Parakkattil




A standard layout of MythTV's menu

A The error pertains to RunDLL and RunDLL is a Windows file responsible for executing or loading .dll modules where the modules can be legitimate or even malware related. You'll usually see a RunDLL "Error loading..." message when a particular .dll file that was supposed to run at startup has gone missing or is deleted. This is because



the file in question may have been deleted but an entry about it still exists in the registry which still prompts Windows to load the file at startup. So, you'll have to remove the entry of this file from the registry but according to the error specifically mentioned by you, your PC is in all likelihood infected by a malware. Unsurprisingly, this is a common problem faced by many Windows users whose computer has been infected with the Conduit browser hijacker which is a pretty persistent malware. To understand how to remove it, follow the steps below:

- First, you need to remove the BackgroundContainer.dll startup registry key using the Autoruns utility for Windows. Download the utility from here: http://dgit.in/Auto_Runs
- Once it's downloaded, double-click on the autoruns.exe program to start the utility.
- Click File > Select Find
- Type "BackgroundContainer.dll" as well as "Conduit" to find entries related to both conflicting files.
- Once you find BackgroundContainer.dll or Conduit in the list, right-click > Delete
- Delete all the entries related to the search terms that you used.
- Restart the computer to check whether you've solved the problem.

If the issue still persists, use CCleaner to find and delete the startup entry with the name Conduit. If you're still facing the same issue, you should download a good free malware removal program like Malwarebytes or even AdwCleaner, scan the system using the anti-malware program and clean it completely to get rid of the Conduit browser hijacker as well as other malware that may be infecting your system. Detailed guide here: <http://dgit.in/MalGuide> 



Kodak Android phone

Kodak will be unveiling a new Android smartphone at the CES 2015 event. Are they too late? <http://dgit.in/KodakPhone>



Best earth images

Check out the best images of the earth taken by the fleet of satellites owned by NASA <http://dgit.in/NASAIImages>

WIN PC Maintenance

Learn about fixing your everyday PC troubles, and the tools to maintain it

Manish Singh

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It has happened to all of us. You've a presentation to submit the day after, you hover your mouse or click on the power button, and the unthinkable happens. The system just won't comply with your wishes. Either it will keep looping around a blue screen, or will act so slow that you literally can't do any work on it, or worse, it just won't turn on.

With complex operating systems these days, pointing out the culprit is never straightforward and the steps we've outlined here are suited for a more general approach. Remember, Google is your friend! That being said, let's check out some of the most common problems users face.

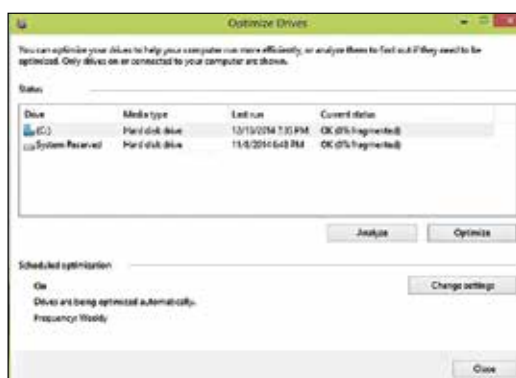
Everyday issues

Speed and performance glitches

Issue: CPU is slow, or unstable, or always under heavy load

If you've recently mounted a new motherboard, or installed a new operating system, you may want to check the BIOS for any improper configuration. You can try the freeware utilities like CPU-Z (<http://dgit.in/CPUzID>) and Cinebench (<http://dgit.in/MCinebench>) to check if your CPU is working fine by comparing it with results of others' over the web.

That would be helpful if your CPU is slow. But what if it's unstable? That's a rather more concerning possibility. If your computer, however, is exhibiting such symptoms,



In Windows 10, the defragmenting tool also lets you optimise the system.

you need to check the temperature first and then test stability by running Prime95 (<http://dgit.in/Prime95>) alone. If it ends up showing a blue-screen to you, your CPU is probably heating too much. Else, you should the RAM modules and for that, you can try Memtest86+ (<http://dgit.in/Memtest86>). If that too isn't the problem, the next component you should check is the PSU (Power Supply Unit). When the PSU fails to provide the right amount of voltage to the motherboard it can also make the system unstable.

But what if your system always seems to be under too much stress? In other

words, it is hogging too much resources at every instance of time even when you know you aren't doing anything. This could be the work of a malware. Try installing the free or trial version of AVG (<http://dgit.in/AVAVG>), or ESET, and run a complete scan to hunt down the malware.



GPU is slow

If your system's graphics has all of a sudden become cumbersome, this could be a software compatibility issue. The first thing you'll need to do is check the GPU temperature using GPU-Z. Then update your graphics drivers as a recent update might have messed things up. Sometimes your GPU is simply not powerful enough and is heating up. It is probably in your best interest if you didn't play the latest AAA game but if it is too important and you know your ways, you may also try over-

clocking (<http://dgit.in/WAPCOVerClock>) to increase the device's efficiency.

Critical issues

Issue: Windows is freezing or slowing down

Freezing is one of the most common and frustrating issues our computers run into every few months. It happens for a myriad of reasons with a common cause being insufficient processor cooling. Generally, it's when the CPU fan gets clogged up with too much dust, or when the thermal paste between the sink and processor has dried up. Cleaning and replacing the thermal paste should help.

Additionally, loose cables and components can also degrade the performance, so you will want to check and tighten everything right. Also, in case you'd overclocked your CPU or GPU recently, you should restore it to normal if it continues to heat up.

If your computer has also slowed down recently, you need to check the task manager to know which process is at fault and uninstall or temporarily stop it. Also, browsers with too many extensions and plugins installed consume a lot of resources.



So many testers

The technical preview for Windows 10 has currently reached 1.5 million testers
<http://dgit.in/1MWin10>



New Apple patent

Apple has a new patent for reverse AirPlay for streaming Apple TV to your iOS devices
<http://dgit.in/AirPlayPat>

Workshop



Glary Utilities lets you clean, optimise, and fix your system

Regardless, you also need to stop a few programs from starting up at the time of login. To do that, go to Run (or open Start menu and start typing) “msconfig”, go to the Startup tab and uncheck all the applications that you don’t need. Google each process name to figure that out.

Issue: Blue Screen of Death (BSOD)

This is one of the most annoying issues of all. Your computer encounters some error and gives you a blue screen before shutting down. This leaves no choice to the users but to restart. On the bright side, though, figuring out why your computer got the BSOD isn’t that tough. Install WhoCrashed to know exactly what caused the BSOD.

Other annoying issues

Issue: USB Drive isn’t showing up or working

At times, a USB port on your system might go haywire. In such a case, you’ll need to check whether the internal cables are properly connected and your BIOS still has the requisite USB header enabled. Once you’re sure there’s no problem there, you need to fire up Device Manager (run/start menu -> devmgmt.msc) and check if any of the USB port is reporting a problem. If so, you need to update and /or reinstall its driver – an option you’ll see in the properties of the port.

Issue: SSD Performance is slow

If your SSD feels slow, there could be some problem. Check to see if it’s a firmware problem on technology forums where multiple users might report the same thing. If not, benchmark it using CrystalDiskMark (<http://dgit.in/CrystalDiskM>) and see if it’s the same as mentioned in the manual. If not

check that it’s connected to a native SATA III port which is set to AHCI. Switching between AHCI and IDE can render your OS useless so create a backup disk image first. Always prefer a native port that is set to AHCI for storage devices.

Maintaining a system

Now that you know how to handle everyday quirks, it is time we also discussed how you can make sure that your computer stays in shape.

Clean, clear, optimize your registry

Much like your house, an operating system also becomes cluttered and messy over time. And much like your house, the system needs cleaning and optimization as well. Regardless of the Windows version you’ve installed on your system, it is always a good idea to defragment your hard-drive every once in a while. For that, you can use Windows’ built-in defragmentation tool called Defrag. To open it, go to Start menu and type “defrag” (without the quotes). Alternatively, you can also use free defrag tools like Auslogics’s Disk Defrag.

For advanced cleaning and optimizing, such as of registry’s, you can try CCleaner (<http://dgit.in/CCleanerD>). Additionally, we’ll also recommend you try D7 suite (<http://dgit.in/D7Suite>). Its user interface isn’t as eye catching, but it can automatically detect and fix several common issues.

Keep your computer virus free and secure

Make sure you’ve a good anti-virus suite installed on your system. The pre-installed security suite from Microsoft has certainly become better over several versions, but according to several reports, it is still not enough to combat some of the more sophisticated malware our computers are exposed to these days. Don’t think about getting more than one anti-virus, though, as it often raises conflicts like false alerts. Besides, it may even hog too much memory and thus slow down other operations.

Updating Windows is also very critical and something that you should not be neglecting. Additionally, it is also recom-

mended that you update your drivers. One of the common gateways for viruses to get into your computer is your browser. And that’s why it has become very important that you check whether your Anti-Virus suite offers internet security or not. Additionally, you can also sign up for OpenDNS (<https://www.opendns.com/>), a DNS service with easily configurable security settings.

You can also automate several of these processes to occur periodically using the scheduler in Windows. Alternatively, you can also use suites such as Tune Up Utilities or Glary Utilities.

Don’t forget the hardware Prefer running your system on UPS

If you’ve a desktop computer, prefer using a decent UPS with all the protective circuits. The good ones protect your computer from current spikes and provides you time to perform a proper shutdown. Almost every components inside your computer including and especially the network card is sensitive to fluctuations.

Cleaning internal components

Regardless of where you keep your system, they are bound to gather dust over time. You can use a vacuum cleaner to get the dust off but be careful since bringing it



CCleaner lets you clean junk off of your system.

too close to the motherboard might cause a few components to fly off (e.g. jumpers). You should also pay extra attention while going through processor fan (CPU fan) and processor heat sink. If your CPU has been getting too hot lately, you may also want to check if the thermal paste between the heat sink and processor chip has dried up. You can buy a new refill for that paste from your local computer store.



NFL deals with Fb

NFL is getting serious with their videos, striking a deal with Facebook, posting highlights and fantasy football content <http://dgit.in/FacebookNFL>



Video game Olympics

Should video games be a part of the Olympics? Rob Pardo, creator of World of Warcraft thinks so. <http://dgit.in/GamingOlymp>

WIN AT Discovery

The digital age has ushered in a new era of discovery, an age where just about every niche is catered for. The art of discovery is not a dark art and we're going to teach you how to WIN at Discovery.

Anirudh Regidi

anirudh.regidi@digit.in

There are many who claim that the Digital Age has weaned us away from the true joy of discovery, from discovering a gem of a book in an aged library, from the (dubious) joy stumbling across a good movie or show on TV, and more. We beg to differ. A little bit of effort and some guidance from us, you'll be well on your way to discovering any joy you choose to experience.

Discovering music

Music is, in many ways, a universal language. Rhythms transcend language and might even be at the very heart of what makes this universe tick. But it's not always easy to discover new music, but that's only because you might not know how.

The usual suspects

The most obvious way to find new music is to use popular services like Last.fm, Spotify, Grooveshark, Pandora and more. Once you setup an account for yourself (via VPN if necessary) and use those services regularly, it's only a matter of time before those services learn your taste in music and throw up songs and playlists that will suit your taste (a.k.a. scrobbling). Just pick a service, use it regularly and let their algorithms do their thing.

Gnoosic.com

This is a site that most of you have probably never heard of and ironically, it aims to serve up artists that you'd like, but never heard of. Discovering new music is simple, head over to gnoosic.com, type in the name of three artists that you love (or even three artists from a genre that you want to listen to at the moment) and then hit go. The site will throw up one artist's name at a time, along with a discussion on said artist (by Gnoosic's members). The onus is on you to find that artist's songs however as Gnoosic will not play back those songs for you. Every time you discover an artist you tell Gnoosic that you liked it, didn't like it, or already knew of it and Gnoosic will fine-tune the recommendations accordingly.

Gorankem

Gorankem.com lets you, and everyone else, rank artists and bands. Pop over there from time to time and rummage through the listings and there's bound to be something you like in the pile. Find gorankem members with a similar taste in music and you'll have found a new buddy as well as a great source for new music.

YouTube Music

This is a comparatively recent launch, and while we're quite certain that many

of you have already been using YouTube as a source of music, the dedicated music

section now isolates all your music listening to a separate, well, section. All you really need to do is to train YouTube. Listen to music, like or dislike the recommendations and YouTube will slowly, but surely learn your taste. Be wary though, accidentally let someone else use your account and your entire listening experience will be screwed, ending up listening to Lady Gaga in the middle of a Black Label Society session.

iTunes radio

iTunes is popular abroad, but maybe not so much in India, at least, as a media hub. That said, if you manage to create a US or UK iTunes account for yourself (you don't need a credit card, just a US address off Google maps), iTunes radio does a fantastic job of understanding your taste in music. Be warned, iTunes Radio will not play the song that you want, when you want it and is very much akin to a radio station in that regard. A great place for discovery.

Hypem.com

Hype machine is an interesting site with a very simple concept, it aggregates the most popular music across a selection of social network sites and blogs. The music might not always be to your taste, but it will be what's popular and you might end up discovering something that you really love.





Vinyl coming back?

With a record label opening up a vinyl factory, are vinyl records making a comeback? <http://dgit.in/VinylTimes>



10 Gbps Speed

Google Fiber was fast, now Minneapolis is set to be the first to be getting a 10 Gbps internet speed service <http://dgit.in/10GbpsInter>

Feature

Discovering Movies

Movies are much more than moving pictures and audio, they're the actualization of imagination, a medium for bringing dreams to life. Good movies are few and far between and sifting through a glut of movies is time-consuming, but it doesn't have to be that hard. Here's how to win at discovering movies.

Jinni

Feeling down, want a pick-me-up type of movie? What about if you want something that's dark and witty, or bittersweet? These are concepts that most recommendations engines and even people will struggle with, but Jinni.com does its level best to offer a solution. It lets you search for movies by mood, genre, plot, place, time period and myriad other filters that you never knew you wanted. You can also fine-tune search results by how serious or unrealistic you want the setting, and so on. It's a great tool and, in our experience, one that does a very good job of churning out acceptable recommendations.

Movie Map

Think of this as a spider-web of movies. You enter a movie's name, hit enter, and you're presented with an inter-connected web of movies that are in some way related to your initial choice. Hovering over a name presents the trailer of said movie. This is an excellent tool for sourcing a quick recommendation for anyone.

GoodMoviesList

As the name suggests, this is a list of good movies. Yes, exactly that. The movies are classified into lists including the best of 2014, the best sci-fi, the best horror, and so on. You can spend hours browsing through the lists and you're sure to find a movie that you like among the hundreds listed.

IMDB

You might be scratching your head and wondering why we're stating something that's so blindingly obvious, but bear with us. IMDB, while a great source for information on movies, is also a great source for discovering movies. There's an entire social network buried in the site and curated lists of movies are available

for the asking. Create an account, spend some time browsing the site. Users put up curated lists all the time, the best horror movies, the best action movies, the best indie movies, the best movies featuring a particular actor and many more such lists. Follow the



right users and you're sure to find what you're looking for soon enough. Quick tip, read the reviews of movies that you know and start following the users that seem to share your opinion and you will probably have found the right one.

Amazon.com

This might also seem like an odd choice, but once you create an Amazon.com account and start browsing through the video section (you don't have to pay to browse), you'll see an option to vote on the movies that are available and those that you've seen. You're feeding Amazon a whole pile of data, but you'll also get tailor-made recommendations.

Discovering Games and Apps

Games and mostly apps meant to provide pure entertainment, but finding good ones can sometimes be quite a challenge. These simple tips should set you on the right path.

Vsauce3

The Vsauce series of channels is a great source for information, the whacky and the extraordinary. The third channel in that group, Vsauce3 features a series called App All Knight and is among the best sources for new apps and games on the Internet. <http://dgit.in/1xjUc4B>

Steam

Steam recently unveiled a Discovery List feature and tagging. These features combined are doing for games what Netflix did to movies, classifying Steam's massive library via user-defined tags. It's a great concept that works very well in real life and the Discovery Queue, a list of game recommendations tailor-made to your taste, is the very best place for finding a game that you'll like. If you make the



time and put in the effort to really immerse yourself in the Steam community and Steam group and curators, you're assured of a deep and rewarding pool of game recommendations, as well as membership to a great community of gamers.

GOG

As old foggies ourselves (at Digit), many of the offerings on GOG.com are very familiar to us, but for you young 'uns out there, it's a whole world of classic games waiting to be discovered and played. GOG.com is a website that offers what



is probably the largest collection of classic games in the world and a library that's second only to Steam's and to top it off, all the games

there are DRM-free. Getting back to you young 'uns though, just pop over to the site and randomly pick-up a few games in a genre that you like. At Rs.50-100 a game, they're cheaper than most good mobile apps and are sure to offer a great deal of entertainment. They also have a very vibrant community that will be more than willing to provide you with recommendations, should you need them.

Universal sources

Reddit

Reddit quite literally is the front page of the Internet. It's almost entirely a user-generated site and is probably the only website that caters to just about all tastes, the good and the uncomfortable. Haunt this site and you'll find good recommendations for whatever it is that you're looking for. Be warned that Reddit is not a place for little kids, so do browse responsibly.

Forums

Forums, regardless of where they're hosted or who they belong to, will almost always feature a section dedicated to movies, music, etc. If you're already a member of a forum that's filled to the brim with like-minded individuals, asking them for suggestions is not such a bad idea when you really think about it!

Google

<http://dgit.in/143Ya87>



Prime number lovers!

Mathematicians might've made a huge discovery in the average gap between consecutive prime numbers <http://dgit.in/PrimNum>



Prototype Bionic Car

The Light Cocoon Sportscar from Germany has a 3D printed ultra-lightweight outer skin that is "bionically inspired" <http://dgit.in/BionicCar>

WIN AT Photography

Be it a DSLR or a smartphone camera, photography has become a big part of our daily lifestyle. Here are a few tips that can help you become a sharp shooter

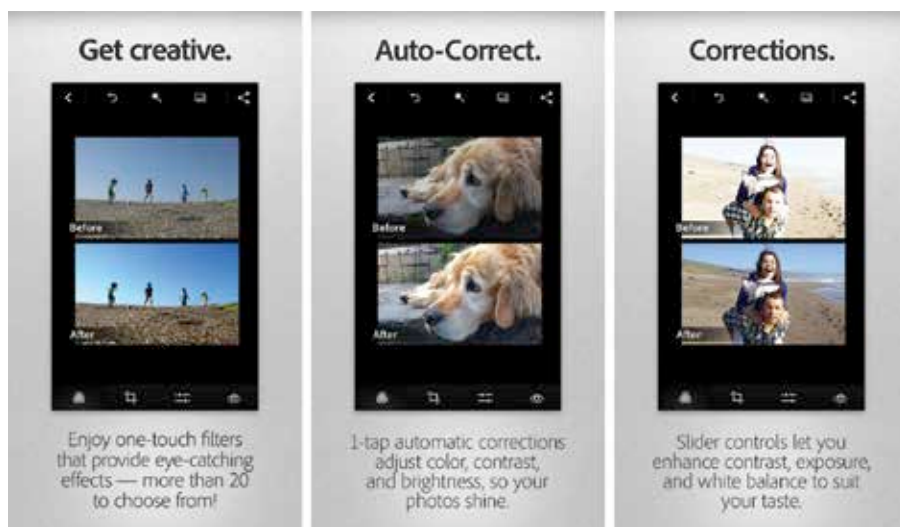
Kunal Khullar
kunal.khullar@digit.in

There was a time when photography used to be a professional's job and only a few could afford to have a camera. It used to be a tedious and a calculative process that required skill, patience and of course, creativity. Today, the process has become far more easier for the photographer thanks to the combination of complicated algorithms along with cutting edge hardware. Taking pictures is now a 'piece of cake' thanks to the easy affordability and compact size of the devices.

But, is it just as simple as pressing the shutter button? Here are some tips that can help improve your bland pictures.

Get your basics right

Having a high-end camera doesn't matter, well, up to a certain level. Having a higher megapixel count is somewhat important, but again it's not a very crucial factor. Photography is all about using the camera smartly. You should also know your equipment well, be it a DSLR, a point and shoot, or even an smartphone. The capabilities and limitations of your equipment along with the lighting conditions are very important to understand, which can only be achieved through a lot of practice. The more you shoot, the



Adobe Photoshop Express: Your one-stop shop for editing on the go

more you understand light and the abilities of your equipment.

Technical knowledge

Having the technical know-how can make a huge difference and this applies to all sorts of cameras, the only difference is that some devices like DSLRs

and smaller sized cameras offer more controls and features when compared to, say a smartphone.

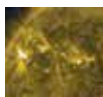
You can either leave all the settings and calculations in the hands of the camera, or take charge and control your 'exposure'.

Now exposure is basically the amount of

light that falls on the sensor to produce an image, and this can be controlled by the right combination of shutter speed, aperture and ISO. Sounds complicated? Well to make it simple, shutter speed is the amount of time the shutter curtain is open, the aperture is the size of the opening of the lens that let's the light enter and ISO is the sensitivity or capacity of the sensor to absorb light. A proper balance of these three determine how bright or how dark your image will be.

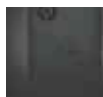
Once you get the hang of the technical aspects, you need to work on your composition. Start with simple and clean pictures. Try to keep a clean background without much distractions. Try to focus on lines, shapes, form, colours, and contrasts. Using the auto-focus is a good





Solar Storm Detector

DSCOVR (Deep Space Climate Observatory) is a new satellite that can detect and warn of impending solar storms about an hour earlier <http://dgit.in/DSCOVR>



Boeing Black

Boeing and BlackBerry are building a phone with high-security that can self-destruct <http://dgit.in/AlienStruc>

Workshop

habit, until and unless the camera is unable to give you a sharp output. The white-balance helps you get the correct colour temperature in your pictures, but you can also use this feature to bring a cooler or a warmer feel to your pictures.

Flash, a big no

Try not to use your in-built flash all the time. Slightly under-exposed pictures look better than having ghostly shadows throughout your picture. While the flash does help in low light conditions, it just doesn't produce natural results and mostly leaves you with shiny or unevenly exposed pictures. If you really need to use a flash, try to bounce it or diffuse it, to have an even spread of light.

Smartphone photography

The most affordable and extensively used camera is the one in our smartphones and frankly speaking, one can achieve great results by using them. Most of the default smartphone camera apps offer exposure compensation with a range of one-to-three stops, ISO control, white balance and few features here and there. Some smartphone camera apps even offer HDR, or the ability to control the shutter speeds, and even focusing features that make your pictures look as if they were shot with a very shallow depth of field. Feel free to tinker with all the settings and features to make your photos look as if they were shot from a high-end camera.

Post production

You always have the flexibility of post processing your pictures if you don't like the results or are in the mood for something artsy. With over a thousand apps available on almost all mobile operating systems, you might be wondering which one's right for you. So we've curated a



VSCO Cam: Don't overdo it with the filters



Breathe new life into images with Snapseed

small list of apps that we believe you should try out.

Third party camera apps


- **VSCO cam:** VSCO Cam offers one of the best selections of pre-set filters to enhance your photographs. The app offers editing tools to control exposure, temperature, contrast, crop, rotate, fade, vignette and more. There are some preset packs as well which can be brought for a few bucks. The app also allows you to share your pictures on social networks and has its own VSCO community that users can join and share pictures and experiences. Android: <http://dgit.in/WinAtPF>
- **Instagram:** Because really let's face it. What would your life be without the ability to share filter-laden square photos of your meal with the world? If not that, then the new dress you just bought must absolutely be showcased to the world through the process of colour altering filters. Regardless, Instagram has become that one app that has taken the smartphone photography world by storm. Android: <http://dgit.in/WinAtPF2>
- **Photoshop Express:** Everyone knows that Photoshop is the king of image editing software, so why not get it on your smartphone? Adobe Photoshop Express brings in a lot of features that lets you do basic editing like cropping, sharpening, colour correction, exposure control and more. The paid

version has extensive controls to fine tune your images.

Android: <http://dgit.in/WinAtPF3>

- **Snapseed:** One of the most famous photo editing apps is Snapseed which is now owned by Google. Apart from allowing basic edits as well as adding effects and border to your photos you can even share your pictures on Google+. It is developed by Nik Software, which is a popular plugins developer for Adobe products. Android: <http://dgit.in/WinAtPF4>
- **Pixlr:** It's an easy to use app that lets you add one or a combination of effects to your pictures. The app comes with a variety of borders, filters and overlays that completely transform your images. It also lets you do basic editing like cropping or tuning the exposure and so on.
- Android: <http://dgit.in/WinAtPF5>

Open your mind

Photography is a lot easier and much more accessible than it was a decade ago. But making a picture that stands apart requires you to have a creative mind and not just having the technical know-how. Mix and match the environment or even look for something conceptual. When you are out for a walk in the park, or just taking the last train to your home, scan your surroundings for interesting subjects. Start following the works of established photographers to learn more. Of course, don't plagiarise their work. 

Price Watch

The latest up-to-date prices of all the gadgets you want to buy this month

Killer Rigs

We have a combination of PC configurations for most budgets out there, including the combo of our test rig

Smartwatches

More than telling the time, these smart wrist devices are more than just a one trick pony, and are well and truly vying for your hard-earned cash. Should you buy one?

Agent 001
agent001@digit.in

If there's one category of products that really announced themselves to the world in 2014, I have to pick the category of smartwatch. These handy devices are like companion gadgets to go along with your smartphone, and they let you keep your phone within the pocket (within Bluetooth range) by delivering notifications right to your wrist. Paired with your phone, smartwatches can help you get over your smartphone addiction by notifying you about incoming calls or SMSes without you having to whip out the handset every single time. That's not all, as most smartwatches also come with extra features like letting you control music playback on your smartphone, and some offer fitness features to help you out with your workouts. That's pretty much what most smartwatches are capable of doing right now. Not very smart now, is it?

One of my biggest beefs with smartwatches selling in the market currently is to do with their look and feel. Apart from, say, the Motorola Moto 360, none of the true smartwatches can be passed off as a plain old watch on your wrist. Most look like contraptions straight off a sci-fi movie (Mr India's invisibility device, remember?), and clearly not something you'd want to wear to work or in a professional environment. Geek chic is great, but you don't want to be confused with




C-3PO's cousin based on that ultra funky smartwatch on your wrist now, do you?

Another thing to watch out for in smartwatches is the fact that their platform is still very young and not clearly defined. For e.g., among smartwatches running on Google's Android Wear OS, LG G Watch R and Moto 360 are the two clear favourites to buy right now. Having said that, the Android Wear platform is awfully barren with respect to third-party apps that you can fire up on these smartwatches, and you're stuck with a chosen few apps to play with right now. To mention some other good smartwatches to buy -- off the ones available in the market right now -- would be Pebble, Apple's Watch, Samsung Galaxy Gear, and Sony's SmartWatch 3. Like I said, the field is barren right now when it comes to dependable purchases from well-known brands. I would've loved to indulge in the world of fitness bands and wrist-based health trackers here, but the fact that they're so numerous and full of independent tracking and sensing methods that they'd require their own page in this section some time in the future. And I also feel that some of the features that fitness

bands try to offer are incorporated within all the good smartwatches that are worth their salt in the market anyway.

There's no doubt that smartwatches are here to stay, whether you like it or not. And it's only a matter of time before traditional watch companies, big or small, make the deep dive into the world of smart wrist devices. However, the landscape is still emerging, and these are undoubtedly early days in the evolution of smartwatches. I

advise treading with caution, not getting easily swayed with e-commerce website discount deals and splurging on smartwatches unless you really really want them. Because most of these devices are either too infantile in their utility value, or Star War-ish in their appeal, and sport clearly exaggerated price tags that make absolutely no sense whatsoever -- seriously, I look at smartwatches sold online and get a mild heart attack everytime I see at their inflated prices. As I see things, a good old traditional watch packed with features like chronometer, barometer, altitude meter, water resistance, etc are cheaper compared to these new-age smartwatches which are hopeless on their own (meaning, if they're not paired with your smartphone) and can't last more than a few days without having to recharge them. Clearly, in my book, based on the evidence so far, the modern smartwatch isn't smart enough just yet. I have no doubt that 2015 will debut some interesting smartwatch concepts or iterations that will raise the bar even higher on last year's products, and your wrist (not to mention your bank balance) will ultimately thank you for your patience. 



Crazy airport stories

Check out some of the craziest things caught by airport security being sneaked on airplanes <http://dgit.in/AirportFrisk>

Agent 001

Exynos or Snapdragon?

Dear Agent001,

I want to buy a Samsung Galaxy Note 4 but I am confused whether to go for the Exynos or the Snapdragon variant. So please help me by giving your precious advice. Thank You.

– Shrikant Kalar

A Hey Shrikant,

Exynos SoCs used to be way powerful about 2 years back but Qualcomm has caught up since then and the Snapdragon 805 now performs equally good if not better than the Exynos 5433. Depending on which benchmark you run either the Exynos variant or the Snapdragon variant will come out ahead and that too by a slight margin.

Check the GeekBench3 scores here: <http://dgit.in/SamN4Exy-VsSnap>. Snapdragon is ahead in this one but if you check out AnTuTu scores then the Exynos variant comes out ahead. When it comes to custom ROMs then Snapdragon SoCs seem to have been favoured a lot more than Exynos variants in the past but it's not a given that the same could be said for current generation of SoCs.

Security-wise, there have been reports of vulnerabilities in both SoCs and that's something which isn't going to change at all. So if you wish to fiddle around with your phone and install custom ROMs then the Snapdragon variant seems to be preferable but if you want to make use of the 64-bit computing power of the Exynos (which is expected to improve with the Lollipop 5.0 update) then by all means you can go ahead with the Exynos 5433.

You might want to watch a few videos to help you make up your mind and also to figure out if that meagre difference in performance between the two variants is something that you're worried about. Most people wouldn't even be able to tell the difference but if you're going to plunk down a sizeable amount for the Note 4 then you need to experience them both.


Digital camera for ₹30,000

Hi Digit!

I'm one of your magazine's biggest fan. Since my childhood I have been fascinated by photography. Now I have got a chance to buy a digital camera. Please suggest me a best one to buy including lens. My budget is around ₹30,000. Please guide me. Thank you.

– Anish Angadi

A Hi Anish,

Considering your budget, I'd say that the best option for you will be the Nikon D5100 and a Nikon Nikkor 50mm f/1.8 lens. The camera should set you back by about ₹24,000, if you keep an eye out on sites like Amazon and eBay, and the lens should be available for around ₹7,000. If not you can wait for the next sale and you'd definitely get it for this much or even lesser. This is an excellent bundle for beginners and the 50mm will be particularly useful for portraits and macro shots, as well as night photography. Good hunting! 

GAME DESIGNERS: MORE THAN MEETS THE EYE

Look around you. You may be in a bus, on a train or in a busy lift on your way to the office, ninth floor. Wherever you look, people scan-read screens, play games, follow directions to the next turn to their destination or the next station on their commute. Wherever you look, you can see people being guided and taken through interfaces — whether digital or physical — leading them in a flow to their next purchase or destination. Wherever you look, you see design is everywhere.

The times, they are a changin', says the song. The back and forth interaction between those screens and their end users, the heads-up-displays, the branching narratives, the progression curves, the learning curves — all notions familiar to game designers. All notions in which we thrive and excel, have now become increasingly pervasive.

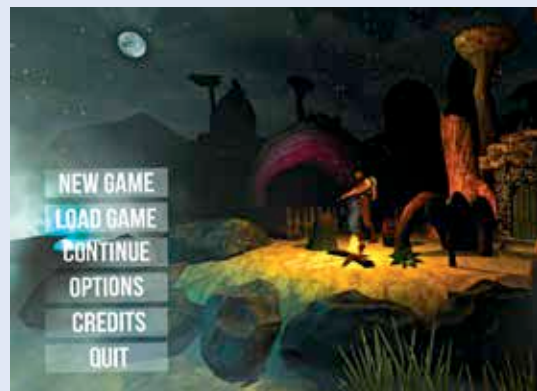
Pervasive to such an extent that industrial designers, e-learning companies, marketing and advertising managers are now using them on a daily basis, though lacking the skills to tackle them in most of the cases. We can't blame them

for these skills are rather difficult to be found in the different sectors of the job market they're shuffling through. Thing is, they didn't look for them in the right place, the video game design job market — for who knows these mechanisms better than game designers?

The cultural shock is happening right now at a low intensity, as the industry at large understand that gaming might mean much more than just shooting zombies and crushing candies and the gaming professionals begin to realize on their side that they might be useful in very, very diverse areas. McDonald's Monopoly? Gaming. Promotional game for the Air Force? Gaming. Loyalty achievements for the clients of a mall? Gaming. Teaching English to kids through interactive stories? Gaming. Building an application that lets you visit museums with your iPad? Gaming. Immersive documentaries? Gaming.

Game design indeed — with all the fields of interaction design, digital storytelling, e-training that it encompasses. It's about time to find ourselves a new, broader name and to fill in the roles in which the industry needs us.

Article written by Patrice Crespy, who is a Game Design Trainer at the Rubika Supinfogame School. He's been a Lead Game Designer and Producer for several years, a critically-acclaimed writer of fantasy novels and roleplaying games, a politics storyteller and a Serious Game Designer. For more information, visit www.dsksc.com.





Twitter + Foursquare

Following the footsteps of Microsoft, Twitter has decided to collaborate with Foursquare to bring detailed locations in tweets in Q1 2015



Facebook to face lawsuit

A class action lawsuit has been slapped on Facebook over unauthorised message scanning <http://dgit.in/FaceTheBook>

SPEND SMART

We shortlist a plethora of Portable Speakers, budget smartphones and monitors for you



PORTABLE SPEAKERS

Brand	Model	Configuration	Battery Type	Max Output (in Watts)	Chassis Material	Frequency Response	Price (in ₹)
iBall	Xpresso	Stereo	Li-ion	2 W	Plastic	100-20,000 Hz	900
Zebronics	NITRO	Stereo	Li-ion	5 W	Plastic	80-20,000 Hz	999
Zoook	Air Drum ZB-BS100	Stereo	Li-ion	6 W	Plastic	60-20,000 Hz	1480
iBall	OPUS	Mono	Li-ion	4 W	Plastic	150-80,000 Hz	1545
iBall	UFO3	Mono	Li-ion	NA	Plastic	100-20,000 Hz	1830
F&D	Swan	Mono	Li-ion	2 W	Plastic	60-20,000 Hz	1899
Umeko	Dynamo	Stereo	Li-ion	10 W	Plastic	NA	2070
HMDX	Jam Classic	Mono	Li-ion	NA	Plastic + Metal	NA	2190
Portronics	Drums	Stereo	Li-ion	2.5 W	Plastic + Metal	NA	2200
JBL	Micro II	Mono	Li-ion	3 W	Plastic	150-20,000 Hz	2250
Portronics	Pure Sound BT	Stereo	Li-ion	NA	Plastic	NA	2340
SoundLogic MTV	Twister	Mono	Li-ion	3 W	Silicone + Plastic	NA	2500
Logitech UE	Mobile Boombox	Stereo	Li-ion	NA	Plastic	150-18,000 Hz	2698
HMDX	Jam Plus	Mono	Li-ion	NA	Plastic + Metal	NA	3200
Divoom	OnBeat 200	Mono	Li-ion	8 W	Plastic + Metal	80-20,000 Hz	3499
SoundLogic MTV	Soundbox	Stereo	Li-ion	6 W	Plastic	NA	3499
Edifier	Extreme Connect MP 260	Stereo	Li-ion	4 W	Plastic	190-18,000 Hz	3658
Creative	D100	Stereo	Any AA	NA	Plastic	20-20,000 Hz	3775
Promate	AquaBox	Mono	Li-ion	3 W	Plastic + Rubber	100-15000 Hz	4799
JBL	Flip	Stereo	Li-ion	10 W	Plastic	150-20,000 Hz	4899
JBL	Flip 2	Stereo	Li-ion	12 W	Plastic	100-20,000 Hz	5707
HMDX	Jam Party	Stereo	Li-ion	NA	Plastic	NA	5999
JBL	Charge	Stereo	Li-ion	10 W	Plastic	150Hz-20,000 Hz	6350
Sony	SRS-BTM8	Stereo	Any AA	4 W	Plastic	NA	6490
Creative	AirWave HD	Stereo	Li-ion	20 W	Metal + Plastic	NA	6619
JBL	Pulse	Stereo	Li-ion	12 W	Plastic	100Hz-20,000 Hz	8999
Bose	Soundlink Color	Stereo	Li-ion	NA	Plastic	NA	11138
Bose	SoundLink Mini	Stereo	Li-ion	NA	Plastic	NA	16875
Logitech UE	Boombox	Stereo	Li-ion	NA	Metal + Plastic	55 – 20,000 Hz	20995
Bose	SoundLink Mobile Speaker III	Stereo	Li-ion	NA	Metal + Plastic	NA	22388



Unmanned cars = no revenue?

Study estimates that driverless cars could mean reduced revenue for the traffic department from fines
<http://digit.in/NoDonutsFoPoPo>



Is Sony the victim?

In the aftermath of the recent hack, The Guardian looks at Sony's past to answer the question
<http://digit.in/SonyVictim>

Price Watch



MONITORS BELOW ₹40,000

Brand	Model	Display Size	Panel Technology	Native Resolution	Built-in Speakers	HDMI Port(s)	Price (in ₹)
AOC	e2262Vwh	21-inches	IPS	1920 x 1080	Yes	1	8699
Dell	S2240L	21.5-inches	IPS	1920 x 1080	No	1	8750
Philips	224E5QHSB	21.5-inches	AH-IPS	1920 x 1080	No	2	9013
Acer	S220HQL	21.5-inches	NA	1920 x 1080	No	1	9300
BenQ	GL 2450HM	24-inches	TN	1920 x 1080	Yes	1	10150
Acer	S240HL	24-inches	TN	1920 x 1080	No	1	10500
Asus	VS238H	23-inches	TN	1920 x 1080	No	1	10900
Samsung	LS24D300HS/XL	23.6-inches	TN	1920 x 1080	NA	1	11150
Viewsonic	VX2456sml	24-inches	NA	1920 x 1080	No	1	12240
BenQ	RL 2455HM	24-inches	TN	1920 x 1080	Yes	2	13350
BenQ	GW 2760 HS	27-inches	VA	1920 x 1080	No	1	17000
LG	27MP35HQ	27-inches	IPS	1920 x 1080	No	1	18780
Viewsonic	VX2770smh	27-inches	IPS	1920 x 1080	Yes	1	22400
Asus	PB248Q	24-inches	IPS	1920 x 1200	No	1	26679
LG	29UB65	29-inches	IPS	2560 x 1080	Yes	2	29000
Dell	S2740L	27-inches	IPS	1920 x 1080	No	1	32000
BenQ	XL-2720T	27-inches	TN	1920 x 1080	No	1	35000



BUDGET SMARTPHONES BELOW ₹10,000

Brand	Model	Operating System	Processor (in MHz)	RAM	Display Size (in inches)	Primary Camera (MP)	Battery Rating (in mAh)	Price (in ₹)
XOLO	One	Android 4.4	1300 MHz Quad Core	1GB	4.5 inch	5 MP	1700 mAh	5569
Xiaomi	Redmi 1S	Android 4.3	1600 MHz Quad Core	1GB	4.7 inch	8 MP	2000 mAh	5999
Micromax	Canvas A1	Android 4.4	1300 MHz Quad Core	1GB	4.5 inch	5 MP	1700 mAh	6025
Micromax	Unite 2 A106 (8GB)	Android 4.4	1300 MHz Quad Core	1GB	4.7 inch	5 MP	2000 mAh	6475
Huawei	Honor Holly	Android 4.4	1300 MHz Quad Core	1GB	5 inch	8 MP	2000 mAh	6999
Motorola	Moto E	Android 4.4	1200 MHz Dual Core	1GB	4.3 inch	5 MP	1980 mAh	6999
Samsung	Galaxy Core 2	Android 4.4	1200 MHz Quad Core	768MB	4.5 inch	5 MP	2000 mAh	7998
Microsoft	Lumia 535	Windows 8.1	1200 MHz Quad Core	1GB	5 inch	5 MP	1905 mAh	9290
HTC	Desire 310	Android 4.2	1300 MHz Quad Core	512MB	4.5 inch	5 MP	2000 mAh	9549
Alcatel	Onetouch Flash	Android 4.4	1400 MHz Octa Core	1GB	5.5 inch	13 MP	3220 mAh	9999
ASUS	Zenfone 5 A501CG	Android 4.4	1600 MHz Dual Core	2GB	5 inch	8 MP	2110 mAh	9999
Sony	Xperia M	Android 4.1	1000 MHz Dual Core	1GB	4 inch	5 MP	1700 mAh	10000

digit KILLER RIGS

Everything you'll ever need to build your own PC.
Whatever your budget.



Basic rig = ₹25,395 ■ HTPC = ₹30,135 ■ Entry-level gaming = ₹48,270 ■ Mid-range gaming = ₹64,280
Ultra high-end = ₹2,74,412 ■ Digit Test Rig = ₹2,70,302

BASIC RIG

Processor	Intel Pentium G3220	3,975
Motherboard	Gigabyte GA-H81M-S1	3,500
RAM	Kingston ValueRAM 2 GB 1333MHz	1,490
HDD	Toshiba 500GB	3,150
Monitor	Acer V196HQL 18.5 inch LED Backlit	5,650
Graphics Card	None	0
Cabinet	NZXT Gamma	2,490
PSU	Corsair VS450	2,200
Speakers (2.1)	Creative SBS A120	1,400
Optical Drive	Samsung SH-224DB/IDDS	990
Mouse	Amkette Ash Black (Bundle)	550
Keyboard	Amkette Ash Black (Bundle)	0
Sound Card	None	0
Total		₹25,395

HTPC

Processor	AMD A8-6600K	7,100
Motherboard	MSI FM2-A75MA-P33	4,750
RAM	G.Skill RipjawsX DDR3 2 GB (2 x 2 GB) PC RAM (F3-12800CL9S-2GBXL)	3,900
HDD	Western Digital WD20EZRX 2TB	5,858
Monitor	None (your TV)	0
Graphics Card	None (HD7560D onboard)	0
Cabinet	Cooler Master Elite 120 Advanced	2,977
PSU	Cooler Master Thunder 450W	2,660
Speakers	None	0
Optical Drive	Samsung SH-224DB/IDDS	990
Mouse	Microsoft Desktop 2000 wireless combo	1,900
Keyboard	Bundled	0
Sound Card	None	0
Total		₹30,135

ENTRY-LEVEL GAMING

Processor	AMD FX6300	6,999
Motherboard	Gigabyte GA-970A-DS3P	5,850
RAM	G.Skill NS DDR3 4 GB (2 x 2 GB) PC RAM (F3-10600CL9S-2GBNS)	3,350
HDD	Seagate Barracuda 1TB	3,750
Monitor	Dell S2240L	8,676
Graphics Card	Sapphire Radeon R7 260X 2 GB	9,975
Cabinet	NZXT Gamma	2,490
PSU	Cooler Master Thunder 450W	2,660
Speakers	F&D F680	3,000
Optical Drive	Samsung SH-224DB/IDDS	990
Mouse	Amkette Ash Black (Bundle)	530
Keyboard	Amkette Ash Black (Bundle)	0
Sound Card	None	0
Total		₹48,270

MID-RANGE GAMING

Processor	Intel Core i5-4440	11,775
Motherboard	ASUS B85M-G	6,000
RAM	Gskill RipjawsX F3-12800CL9D- 8GBXL (2 x 4GB)	6,300
HDD	Toshiba 1TB DT01ACA100	3,650
Monitor	Dell S2240L	8,676
Graphics Card	ZOTAC GTX 660 192-bit 2 GB	12,830
Cabinet	Thermaltake Versa H21	2,980
PSU	Seasonic S12II 620 Watts	5,630
Speakers	F&D F680	3,000
Optical Drive	Samsung SH-224DB/IDDS	990
Mouse	CM Storm Devastator (Bundle)	2,449
Keyboard	CM Storm Devastator (Bundle)	0
Sound Card	None	0
Total		₹64,280

ULTRA HIGH-END GAMING

Processor	Intel Core i7-4790K	23,499
Motherboard	ASRock Z97 Extreme6	14,340
RAM	Corsair Vengeance 16GB CMY16GX- 3M2A1866C9B	13,000
HDD	WD WD30EZRX 3TB + Samsung 850 Pro 256GB SSD	20,215
Monitor	BenQ BL3200	73,850
Graphics Card	ZOTAC GTX 980 ZT-90201-10P Standard	44,999
Cabinet	NZXT Phantom 820	16,000
PSU	Cooler Master V1000	15,200
Speakers	Logitech Z906 5.1	23,299
Optical Drive	LG Blu-ray WH16NS40 RW	5,950
Mouse	Roccat Kone XTD	5,750
Keyboard	Corsair Vengeance K70	8,460
Sound Card	ASUS Xonar Phoebe	9,850
Total		₹2,74,412

PRIMARY DIGIT TEST RIG

Processor	Intel Core i7 - 4960X (Extreme Edition)	70,000
Motherboard	ASRock X79 Extreme 9	28,499
RAM	Corsair Dominator 32GB - 2133MHz (8GB x 4)	36,599
HDD	Toshiba DT01ABA100V	3,810
SSD	SanDisk Extreme II 240GB (x2 for HDD testing)	24,980
Graphics Card	ZOTAC GTX 980 AMP! Extreme Edition	50,850
Cabinet+ Cooler	Cabinet (NA) + Intel RTS2011LC - Stock AIO	NA
PSU	Corsair HX1050	16,291
Monitor	BenQ GL2460HM	11,775
Optical Drive	NA	NA
Mouse	Razer Ouroboros Elite	10,999
Keyboard	Roccat Isku FX	7,500
Sound Card	ASUS Essence STX	8,999
Total		₹2,70,302

digit RECOMMENDED BUYS

From smartphones to graphics cards, here's what we recommend for your next purchase!



TOP 3 BEST SMARTPHONES

Brand	Model	Price (in ₹.)
Sony	Xperia Z3	47,990
Motorola	Moto X (2nd Gen)	31,999
Apple	iPhone 6	53,500



TOP 3 GAMING LAPTOPS

Brand	Model	Price (in ₹)
ASUS	G551JK	90,000
MSI	GE60 2PE	1,12,290
MSI	GS60 2PE	1,48,000



TOP 3 PREMIUM POINT AND SHOOT CAMERAS

Brand	Model	Price (in ₹)
Fujifilm	X100s	68,000
Sony	DSC-RX100 II	34,989
Fujifilm	FinePix X20	29,999



TOP 3 ULTRABOOKS

Brand	Model	Price (in ₹)
Toshiba	Portege Z30t-A	1,00,000
Acer	Aspire S7-392	99,999
HP	Elitebook 1040 G1	1,49,865



TOP 3 BUDGET GRAPHICS CARDS

Brand	Model	Price (in ₹)
ZOTAC	GTX 660 192-bit 2GB	12,830
ZOTAC	GTX 750TI 2 GB	10,740
Sapphire	Radeon R7 260 X 2GB	9,975



TOP 3 BEST GRAPHICS CARDS

Brand	Model	Price (in ₹)
Sapphire	Radeon R9 295X2	1,19,999
ZOTAC	GTX 980 AMP! Extreme Edition	50,999
ASUS	GTX TITAN Z	1,39,000



TOP 3 BUDGET TABLETS

Brand	Model	Price (in ₹)
ASUS	Nexus 7 2013 (32GB + WiFi)	17,999
Apple	iPad Mini Retina 16GB WiFi	27,500
Digiflip	Pro XT911	14,999



TOP 3 BEST TABLETS

Brand	Model	Price (in ₹)
Apple	iPad Air 2 64GB	42,900
HTC (Google)	Nexus 9 (32GB + LTE)	44,900
Samsung	Galaxy Note 10.1 (2014 Edition)	44,640



TOP 3 BUDGET TO MID RANGE IEMS

Brand	Model	Price (in ₹)
SoundMAGIC	E10M	2,850
Cowon	EM1	1,099
Creative	HITZ MA350	1,399



TOP 3 GAMING HEADPHONES

Brand	Model	Price (in ₹)
SteelSeries	Siberia V2	8,000
Kingston	Hyper X Cloud	7,500
Thermaltake	Ttesports Level 10M Diamond	19,992

INSIDE

Bazaar

THE LATEST PRODUCTS
REVIEWED FOR YOU

The Digit Test Centre receives hundreds of products every month. Each of these products is put through a series of tests and is finally given a score. The final score is arrived at after considering a number of factors and evaluating them in terms of features, performance, value for money, build quality, and, in the case of software, even ease of use.

For better understanding of our ratings, here's a quick guide to our overall score

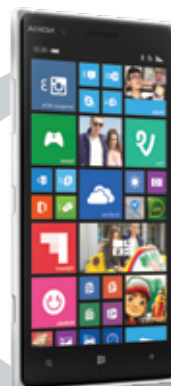
10 to 30 **Extremely poor product.**
Keep away!

31 to 50 **Strictly OK.**
Not recommended

51 to 70 **Decent product.**
Go for it, but there may be better products out there.

71 to 90 **Very good product.**
Highly recommended.

91 to 100 **Ground-breaking product.**
We've never seen anything like it before.
A definite must buy!



◀ Page 87
Nokia Lumia 830



Page 89 ▲
Mitashi GameIn
ThunderPro



▲ Page 88
Xiaomi Redmi
Note 3G



▲ Page 91
SimpleAudio Go



▲ Page 92
Sony MDR-
XB950BT

& MORE...

**INTERACTIVE
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INTO LIFE!



Bing Search in Word

Microsoft is integrating Bing search into Word Online, which is going to be called "Insights for Office" <http://dgit.in/WordBing>



PureView technology

Check out this animated video that shows how the PureView technology 41-megapixel camera in the Nokia Lumia 1020 works <http://dgit.in/NokiaLens>

Bazaar

HP Pavilion 13

A good basic laptop at the price. Barely.

Getting your hands on a good laptop at the ₹40k price range can be a bit tricky at times, because it's an awkward price range to be in – sandwiched between the budget laptop category around the ₹25k to ₹35k mark, and the ₹45k to ₹50k mark mainstream laptops. Notebooks at this price point are transitional between the budget to mainstream laptop segments, and this can always be a difficult handoff.

Not so much with the HP Pavilion 13 notebook, though. For its asking price, we found it to be a good basic laptop to have. HP's Pavilion range of laptops have traditionally rolled out good looking laptops at a slightly higher price tag, but it's good to see that this lower-price Pavilion 13 has maintained some of those characteristics. The laptop has a snazzy metallic gray colour scheme, is of a slim profile overall, and has a bit of a polished look and feel going for it – great to see that, although it's not totally unexpected. At 1.8 kg, this laptop is in the ultrabook range, meaning it's quite easy to hold onto and transport while tucked away in your backpack, which is a good feature in any laptop. Made out of plastic through and through, it's good to see the HP Pavilion 13 is built well – not exceptionally so, but we found no undue creaking at its joints and its screen hinge does a good job at fusing the screen with the rest of the chassis.

Typing on the Pavilion 13's isolated, island-styled keys is a good experience, with little or no flex encountered during furious bursts of typing. We've seen that sometimes manufacturers end up using a flimsy metal plate as the base for the keyboard but that's not the case here. It's single-slab touch pad (with no dedicated mouse buttons) is good to use – once you get accustomed to its feel – and we found no fault in its haptic feedback. The laptop's Beats Audio speakers are good compared to most laptop speakers we've encountered at this price bracket, but they aren't exceptionally great by laptop audio standards – which are still disappointing, overall, to say the least.

Coming to the Pavilion 13's core performance, we found it to be average, and within the range of its onboard hardware – not bad, not great either. Satisfactory is the term. Its screen's brightness isn't too great at 130 cd/m2, and with a contrast ratio of 97:1, we can clearly say that the Pavilion 13's screen isn't very good. But for basic use, it's alright. Watching movies on the anti-glare screen



helps block out reflections to a large extent, and the accompanying onboard audio definitely adds to the experience. Its HD webcam is quite efficient at handling video chats through Skype or Google Hangout, no problems whatsoever. Definitely no gaming on this machine, since it lacks a discrete graphics chip, and the most you can do without throttling it down is access the Web through a browser, listen to music, watch movies, work on productivity software, and that's about it. For most people, that's enough, and a laptop need not be capable of doing anything more.

What we definitely liked about the HP Pavilion 13 are two things – 1 terabyte of hard disk space and 3 hours of runtime on our battery benchmark (at high performance preset), which should let this laptop last between 4 to 5 hours on a single charge. We don't have any complaints about that.

Basically, it all boils down to the price. Better options do exist, when it comes to specs from brands like Acer and Lenovo, but the HP Pavilion 13 with its petite frame, lightweight form factor tries to offer something in areas that others haven't fully locked down on. It is highly ultra portable as a device, offers encouraging audio performance, oodles of storage space and good battery performance. For a laptop that's suited for basic tasks and a little casual gaming on the side, you can't go wrong with this one.

Jayesh Shinde



Features	65
Performance	60
Value	60
Design	65

Specifications

Display: 13.3-inch, WLED backlit, anti-glare screen;
Resolution: 1366x768 pixels; **CPU:** Dual-core Intel Core i3-4030U @ 1.9 GHz; **RAM:** 4GB; **HDD:** 1TB, 5400 RPM; **GPU:** Onboard Intel HD 4400; **I/O ports:** 2 x USB 3.0, 1 x USB 2.0, 1 x HDMI, 1 x Ethernet, 1 x headphone, mic combo port; **Wireless:** 802.11b/g/n Wi-Fi, Bluetooth 4.0; **SD Card Reader:** Yes; **OS:** Windows 8.1; **Weight:** 1.8 kg

Contact

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Microsoft Sway

Microsoft's new app Sway lets you build general online presentation documents is now open for all <http://dgit.in/MicrosoftSway>



Battle for space

Everything about the private sector's space race in this brilliant and colorful infographic <http://dgit.in/BattleForSpace>

Corsair Graphite 760T

One for the show-offs

The original Graphite 600T from Corsair was a wonderful case and the 760T retains the same plastic-metal shell design concept. Although this time around, the entire side panel is transparent and made of good quality acrylic. We especially liked the hinged door design along with the spring loaded latches. You can also mount four SSDs using the included modular quick mount trays. They've also added a magnetic top cover that fits really well and is a welcome add-on.

Three pre-installed Corsair 140mm AF series fans coupled with the inbuilt fan con-



Price
₹14,500

trol help in maintaining the temperature and noise inside the case and as a result, the Graphite 760T performs fairly decent with the load temperatures inside never crossing 38.5°C with the ambient room temperature being 28°C.

There's a fundamental problem with saturating the market with innumerable options, at one point the price to features(or performance) ratio of two different products in the same category is bound to be immensely close. This is exactly what happens with the Graphite 760T. Corsair's own Obsidian 750D which belongs to its flagship series of cases is available for a similar (or even cheaper) price and since the insides of the 760T and the 750D are almost identical, your choice boils down to your preferred material finish and the price difference between the two cases.

Siddhant Sharma



Features	84
Performance.....	74
Build Quality	87
Value for money.....	55

Specifications

Form Factor: Full-Tower;
Motherboard Support: Mini-ITX, MicroATX, ATX, E-ATX, XL-ATX; **Fans:** 2x140mm (Front), 1x140mm (Rear); **PSU Location:** Bottom; **Drive Bays:** (x3) 5.25", (x4) 2.5", (x6) 2.5"/3.5"; **Expansion Slots:** 9; **Dimensions:** 564(H) x 246(W) x 568(D)mm; **Weight:** 11.2kg; **Warranty:** 2 Years

Contact

Corsair Memory
Phone: 9845651608
Email: indiaservice@corsair.com
Website: www.corsair.com

Gionee Elife S5.1

Beauty, not a beast

It's not often that we're wowed by the design of a smartphone, but this one did it. The Gionee Elife S5.1 is one of the slimmest smartphones in the world and leaves no stone unturned in terms of design and build. The device is like a flattened Xperia smartphone, which makes the iPhone 6 feel bulky. It weighs only 97.7 grams, making it lighter than most other phones. The glass back makes it a bit slippery, but slapping on a cover takes care of that and pretty much everyone does that. On the build and design front, the Elife S5.1 is actually one of the best we've seen in a long time.

Sadly though, the design doesn't go with what's inside. At ₹18,999, the phone is grossly overpriced. The



Price
₹18,999



MediaTek MT6592 octa-core is available on much cheaper devices, all of which perform better than the Gionee Elife S5.1. The processor doesn't perform well and the phone is underpowered, both on regular usage and on benchmarks. Even 1 GB of RAM feels a bit less given that Gionee's Amigo UI consumes a fair portion.

In addition, the battery life, though better than what we expected, is nothing close to what its competitors come with. The 4.8-inch display doesn't feel lacking but we'd have liked it better had it sported a resolution of 1080p instead of 720p.

The 8MP camera is pretty good in normal light but fails under low light conditions. While the camera is acceptable, the performance overall isn't. The brilliant design doesn't make up for a laggy experience and we can't quite recommend this smartphone.

Prasid Banerjee



Features	81
Performance.....	61
Design	80
Value	53

Specifications

Display: 4.8 inch 720p HD IPS;
Processor: 1.7 GHz MediaTek MT6592 octa-core SoC; **Battery:** 2050 mAh; **Operating System:** Android 4.4 KitKat; **RAM:** 2GB; **ROM:** 16GB

Contact

Gionee India,
Phone: 1800 208 1166
Email: gcare@gionee.co.in
Website: <http://gionee.co.in/>



Foursquare for iPad

After years of being left out, Foursquare is finally available on the iPad. Download it from the app store now! <http://dgit.in/FoursquareiPad>



Attention to detail

A Beretta shotgun is a thing of beauty. Watch this video to know of the intricacies of making one from scratch <http://dgit.in/BerettaShot>

Bazaar

Nokia Lumia 830

Happy ending? Not quite.

The last of the Lumia phones sporting the Nokia badge, the 830 features a sharp metal frame with an anodized finish giving it a flagship feel. The display sits on top of the frame and is slightly raised from the body sporting a curved finish. The 5-inch display is sharp and bright, the contrast is great and the colours look rich thanks to the adoption of AMOLED display technology. Even under the harsh sun, the readability is surprisingly good.

Nokia didn't go for on-screen buttons on the Lumia 830 and instead opted for capacitive buttons underneath the display. At the back, the rear cover is comprised of a polycarbonate material and it comes off to reveal the microSD card, nanoSIM card slot and the battery. Similar to the Lumia 1020, there is a smaller round section which houses the camera lens and the LED flash. The phone fits well in your hand and doesn't slip off easily thanks to the metal frame which provides a decent amount of grip and weight.

The smartphone runs on Windows Phone 8.1 with the latest Denim update. Now you can create folders on the start screen, have more information on your glance screen and a lot more other improvements have been made. There is of course, the notifications panel called the Action Center that can be pulled down from the top and in it we get to see quick settings toggles, three different sizes for tiles, and a lot more. The live tiles have been improved as they are more intuitive and offer more information. Overall, the performance is noteworthy and the OS runs perfectly smooth without any stutters or lag. Microsoft has definitely improved some important features, however, there are still a few things here and there which makes the mobile OS fall short when compared to Android or iOS. Firstly, the apps are not fast enough and don't load as quickly. Secondly, Windows Phone still falls short in the variety of apps. Yes, the numbers have increased but some of the crucial apps are still missing.



Price
₹26,835



Gaming on the device is fairly good, but we were disappointed when we played a resource heavy game like Asphalt 8. There were some obvious frame drops and at certain periods the stuttering became a bit too cumbersome. Games that require less resources felt much more stable.

In the battery department, you get a 2200 mAh battery which sounds decent and should provide you almost one and a half day's worth of juice for regular use. This includes checking your email, your social networks, clicking some pictures and so on. It has wireless charging support as well, so you can just pop it on a wireless charging pad to charge the device.

In the camera department, the handset sports a 10 megapixel rear camera and a 0.9 megapixel front camera for taking selfies. The primary camera comes with OIS (Optical Image Stabilisation) and PureView technology with an F/2.2 aperture. It performs great in bright conditions with pictures sporting rich colours and you can easily make out the details. Low light performance is decent with a slight visible noise, however, a stable hand will always get you good results. The best part is that the (Lumia) camera app offers manual controls including the option to change your ISO, shutter speeds, exposure, white balance, and so on. All of which is reminiscent of the Lumia 1020. We were highly impressed with the video recording capability as not only do the videos look good but the audio quality is superb since videos are recorded with dual-channel AAC audio at 256 Kbps, and you also get an option for Dolby Digital Plus 5.1 recording.

For a price of about ₹26,000, the Lumia 830 is a good Windows Phone but not the best smartphone as you can get much better options in the market like the Nexus 5, Sony Xperia Z1 Compact, etc. It offers an appealing design, a smooth OS and a great camera, but somehow it doesn't justify the price.

Kunal Khullar



Features	73
Performance	58
Value	65
Design	82

Specifications

Display: 5-inch Display; **Resolution:** 1280x720; **Gorilla Glass 3;** **Battery:** 2200mAh; **Storage:** 16 GB with microSD support upto 128GB; **Camera:** 10MP rear autofocus with LED flash and Carl Zeiss lens, 0.9MP front facing; **SoC:** Qualcomm Snapdragon 400; **CPU:** Quad-core 1.2 GHz; **GPU:** Adreno 305; **RAM:** 1GB; **Operating System:** Windows Phone 8.1; **Connectivity:** 3G, Wi-Fi, Bluetooth, NFC

Contact

Nokia India Pvt. Ltd.
Phone: 022- 33286000
Email: NA
Website: www.microsoft.com/en-in/mobile/



Stickered for Messenger

Facebook rolls out Stickered, an app which allows you to add stickers to your photos and share them <http://dgit.in/StickeredForMessenger>



New Instagram filters

Slumber, Crema, Ludwig, Perpetua, and Aden are Instagram's five new filters in two years <http://dgit.in/NewInstaFilters>

Xiaomi Redmi Note 3G

Xiaomi goes big

When you price a phone at ₹8,999 and give it specs that would otherwise cost ₹20,000, you've created something fit for the Indian market. There's a point where this needs to become the norm though, which is why we ignored the price of the Xiaomi Redmi Note.

The 5.5 inch 720p display makes this phone big but the problem is that the overall design is too plasticky and feels very cheap. The extreme glossiness makes it slippery and combined with the big size, it's quite tough to not let it slip.

The MediaTek MT6592 octa-core SoC has never been our favourite and it disappoints again on this one. The phone has a poor battery life.



Features	83
Performance.....	62
Design	71
Value	89

Specifications

Display: 5.5 inch 720p HD IPS;
Processor: 1.7 GHz MediaTek MT6592 octa-core SoC; **RAM:** 2GB;
ROM: 8GB expandable to 32GB;
Battery: 3100 mAh; **Camera:** 13MP rear, 5MP front

Contact

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Phone: 1800 103 6286
Email: service.in@xiaomi.com
Website: www.mi.com/in/

Prasid Banerjee



Price
₹8,999

Though the octa-core allows for a snappy UI and multi-tasking, you do notice lag when gaming on this device. The Asus Zenfone 5 is slightly under-powered compared to this phone but it offers uniform performance. The Redmi Note starts off as a powerhouse, but soon enough the lag and stuttering becomes prominent.

What really impressed us was the 13MP rear camera. The camera is weaker than the one on the Xiaomi Mi3, but it's still quite good. The white balance and colour reproduction are really good under normal light and it feels like one of the better cameras in this range.

Overall, the Redmi Note is a device that is aptly priced at the moment. If you're expecting another Mi3 then you best lose hope. The Redmi Note is strictly a value for money smartphone.

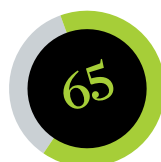


STK Groovez SMC650 Bluetooth speaker

Get the party started

STK is a common brand name that's known for making smartphone accessories. One of the latest products from them is the SMC650 Bluetooth speaker which comes with an in-built microSD card slot, FM radio and a microphone for making phone calls.

The speaker is compact and has a cone-like shape. There is a chrome rim on the top of the speaker along with the grill and four buttons on the side which allows you to control your music, volume and attend calls. At the bottom you will find the power switch and some blue-LED lights covered with a translucent rubber grip going all around.



Features	70
Performance.....	60
Value	70
Design	62

Specifications

Bluetooth: 2.1; **Range:** 10m; **Output** 3W; **Battery** 300mAh Li-polymer; MicroSD card slot; FM Radio; Calling capability with built in microphone

Contact

Company: STK
Phone: 9840308113
Email: vishal.joshi@santok.com
Website: www.stk-acc.com/in



Price
₹2,199

The speaker also has a 3.5 mm audio jack and a miniUSB port to charge the speaker. The speaker indicates the current input mode by using prerecorded audio clips.

The microSD card feature is quite interesting as you can swap your card from your phone and it starts playing MP3 tracks right off the bat. When making calls the clarity of the microphone is not bad and there is next to no distortion on the speaker. When you don't have a Bluetooth device connected or a microSD card in the speaker, it switches on the FM radio.

Coming to sound quality, the bass overpowers the sound and the overall quality goes for a toss. The speaker is loud enough for its size. Although, at high volumes the sound is not very appealing. If you are not a big audiophile, then you might not mind getting this device.

Kunal Khullar



New BlackBerry Classic

BlackBerry has divulged the new Classic smartphone to fulfil the dreams of all those who still admire the older QWERTY phones. <http://dgit.in/NewBBClassic>



Facebook ditches Bing

Facebook no more incorporate search results from Microsoft's Bing. Only allows users to search for stuff posted their friends. <http://dgit.in/ByeBing>

Bazaar



Mitashi GameIn ThunderPro

Hadouken! A step in the right direction.

Features 77
Performance 70
Build Quality 76
Value for Money 65

Specifications

Processor: Cortex A9
1.6GHz; **RAM:** 1GB; **GPU:**
Mali-400 MP; **OS:** Android
4.4; **Battery:** 3500 mAh;
Screen Size: 5 inch TFT;
Resolution: 800x480;
Camera: Yes; **3G Support:**
Yes; **Connectivity:** Wi-Fi
802.11 b/g/n; **Output:** HDMI;
In-built **Memory:** 8GB
(expandable upto 32GB via
MicroSD Card)

Contact

Mitashi Edutainment Pvt. Ltd.
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Email: service@mitashi.com
Website: www.mitashi.com

The ThunderPro is a new entrant in Mitashi's GameIn series of consoles and its design is quite a departure from the previous devices in the range.

While we were not particularly left impressed with the older models, the ThunderPro manages to upstage them and grab out attention. Especially with its superior build quality and battery life. This time around, Mitashi managed to include two proper full size analog sticks coupled with extra shoulder buttons. The 5-inch screen, however, isn't very bright when compared to smartphone screens of today. We weren't too impressed with the colour saturation and vertical viewing angles either. The latter doesn't matter with small screen sizes.

Although the specifications of the ThunderPro are pretty standard for a device at this price, its real

world performance is decent. We didn't see any lag while performing regular operations or browsing on it. Gaming was smooth too, something that

didn't necessarily hold true for its predecessors. The ThunderPro shines the most in gaming using emulators and Mitashi has pre-installed emulators with popular games for almost every classic game console available. Playing 8/16/32/64-bit games on the ThunderPro is a good experience thanks to the physical buttons.

The device has two speakers at the front that are quite loud. As for playing normal android games, the console has an inbuilt virtual button mapping app that resides on the action bar for easy access. All in all, the ThunderPro is big improvement.

Siddhant Sharma



HTC Re digital camera

Point and shoot

HTC's peculiar looking device called the 'Re' is an attempt by the Taiwanese OEM to take a shot at the action camera market. The camera is portable, quite easy to use and looks like an asthma inhaler. There are just two button, one to take pictures and record videos and the other to activate the slow-mo mode. There is a microSD card slot and a microUSB charging port at the bottom. The camera is waterproof and can be used under water for about 30 minutes at a depth of 1 meter as it's IPX7 certified.

Since the Re itself doesn't have a viewfinder you can use the Re camera app on your Android or iOS device as a viewfinder. The app also lets you control more features of the camera including time-lapse and gives you access to

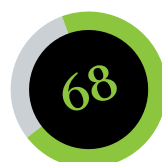


all the images stored on the microSD card within the device.

The Re's camera has a 16 megapixel sensor that can record 1080p videos at 30fps. Thanks to the wide angle lens, the area coverage is quite vast and you can definitely take some great selfies. Images come out quite decent although pictures taken indoors and in low light turn out to be grainy, underexposed and mostly blurred. You need to keep your hands really stable when clicking stills which is true for all cameras in this price point. On the other hand, videos turn out to be more stable and the output is similar to what you get on mid-high range smartphone cameras.

For the price, the Re offers a decent package but it comes nowhere close to the quality you can achieve from a GoPro.

Kunal Khullar



Features 68
Performance 65
Value 70
Design 70

Specifications

16MP CMOS sensor; 1080p videos at 30fps; 146 degree wide angle f/2.8 lens; Built-in microphone; MicroSD card slot upto 128GB; Bluetooth 4.0; Grip sensor; 820mAh battery; IPX7 certification

Contact

HTC Corporation
Phone: 1800 266 3566
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Website: www.htc.com/in/



Sticky Sensor

Japanese team of researchers have developed a sticky sheet with sensors to measure electrical activity <http://dgit.in/StickySen>



Floating solar power

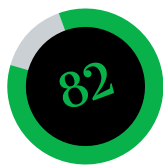
Japan's Kyocera Corporation is planning on building the world's largest floating solar power installation <http://dgit.in/KyoceraSol>

Xiaomi Piston 2 in-ear headphones

Budget audio done right

The Mi earphones have a 1.2 metre long Kevlar fibre cable that manages to stay untangled even when kept messily in a bag or in the pocket.

The cable appears quite hardy, at least up to the cylinder with the in-line controls, beyond which the split cable takes up a more traditional guise with its rubber coating. The rest of the earphones, including the 3.5mm connector and the earpiece unit that houses the drivers and the flanges, are made of ribbed metal. The overall build quality is fantastic, almost unbelievably so, especially when you consider the price of these earphones. Mi's pricing strategy is easily evidenced in this product category as well.



Performance.....	71
Features	83
Design & Build	80
Value for Money	94

Specifications

In-Line controls: Yes; **Cable length:** 1.2m; **Impedance:** 12-16 ohms; **Sensitivity:** 93 dB; **Rated Power:** 5 mW; **Frequency range:** 20 Hz to 20 KHz

Contact

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Phone: 1800 103 6286
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Website: www.mi.com/in/

Nikhil Pradban

Asus Fonepad 7 Dual-SIM with ZenUI

A quintessential budget tablet

About six months ago, we reviewed the Asus Fonepad 7 Dual-SIM. Back then, we'd told you that the device was a good choice for those on the lookout for a budget tablet but it won't suit you if your requirements include resource intensive operations. Well, Asus has come out with a refresh of the Fonepad 7 but it's a very minor update. With it, the company has added the ZenUI, which had been introduced in its Zenfone series, to the tablet line-up as well.

It's the same 7-inch tablet, with thick bezels and an overall sturdy build. It's not much of a looker but fits the budget for



Features.....	73
Design	63
Performance.....	69
Value	78

Specifications

Display: 7 inch 1024x600p HD IPS; **Processor:** 1.2 GHz Intel Clover Trail Z2580 dual-core; **Operating System:** Android 4.3 Jelly Bean with ZenUI; **RAM:** 1GB; **ROM:** 8GB expandable to 32GB; **Battery:** 3950 mAh; **Camera:** 2MP rear, 0.3 MP (VGA) front

Contact

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Prasid Banerjee



those looking for an Android-based tablet at below ₹10,000. At ₹8,999, the price is right and with Asus there's not much to complain. We don't like the 2MP camera at the back and neither will you. But then again, if it is indeed irksome then you can check out the upgraded version of this tablet which costs a little over ₹10,000 and comes with a 5MP camera.

This one, however, is all about the ZenUI and we're happy to report that it doesn't change much in terms of the performance. The addition of a custom UI usually means lesser performance but the ZenUI doesn't affect it much. We did see some lag after filling the device up with apps not to the extent that'd make us label this a bad tablet. Also, the features added by the ZenUI make up for it.

Earth timelapse

Check out this amazing six-month time lapse video of Earth from space taken from aboard the International Space Station <http://dgit.in/EarthLapse>



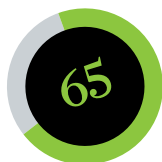
Ancient colour vision

Eyes from 300 million old fossils show rod and cone cells indicating coloured vision <http://dgit.in/AncientCol>

Bazaar

Astrum BT-021N Luxury Bass

Feature rich average performer



Performance.....50
Features77
Design & Build60
Value for Money75

Specifications

Interface: Bluetooth 3.0 with NFC, AUX, USB;
Rated battery life: Up to 7-10hours; **Power:** 5W RMS; **Mic:** Omni directional/noise filter Microphone; **Battery specs:** 1600mAh, 5-7Hrs Charging time

Contact

Astrum Holdings
Email: info@astrumltd.com
Website: <http://www.astrumltd.com/>

This little Bluetooth speaker bears a striking resemblance to the much more expensive and premium Cambridge Audio Minx Air 200 wireless speaker we'd received a while ago. Of course, the Astrum BT-021N is about 5 times more compact and 10 times cheaper. In fact, it's one of the least expensive Bluetooth speakers we've received. Putting it head on with our best value winner from last year, the Zook BS100, we noticed a lot of differences. First, the Astrum speaker has managed to throw in NFC at this throwaway price which is quite commendable. Second, it's got a 5V USB out, which is quite rare not just at this price point but even otherwise. Very few speakers like the JBL Charge give you the option to charge your devices using this battery that you're anyway lugging around.



Price
₹2,699

Now for the flip side: the speaker isn't the best performer out there. While there is some bass, it's accompanied by distortion as well. The speaker produced about the same volume output as the Zook BS100 perhaps a smidgen less but not too much. At this price point you can't

expect stellar audio quality and that is what you get – something that greatly amplifies the capabilities of your smartphone speakers but not much else. If you're looking for clarity, precision, and all those lofty "luxurious" ideals you'll need to look elsewhere and be prepared to shell out more moolah. But if you're looking for a feature rich device that amplifies your music, can double up as a power-bank for those tight situations, then look no further, the Astrum BT-021 is your speaker.

Siddharth Parwatay

SimpleAudio Go

Simple yet superior

Early last year, PC components manufacturer Corsair announced the acquisition of Simple Audio, a company specialised in developing home audio streaming solutions. The Go portable Bluetooth speaker is the result of this partnership and is supposed to bring with it the acquired know-how from the Scottish audio makers. The speaker is slightly curved along its front grille, with the edges sweeping back. Both in terms of size and design, the speaker can't help but remind you of the Ultimate Ears Mobile Boombox portable speaker, which for some time now has been our "go-to" recommendation for anyone looking for a compact Bluetooth speaker that does not compromise on audio quality. With the SimpleAudio Go, that recommendation might just change.

In a head-to-head comparison the Go was able to deliver deeper bass on many of

our test tracks. One of the things we'd liked about the UE M Boombox was that no matter how much you push it (nearly 100 percent volume), the speaker just wouldn't distort. It's similar with the Go but it's much louder! Acoustic tracks open up and unlike the Boombox which was warm, the Go speaker clearly is tuned to have a bright sound signature. That's not to say the mid range or lows aren't well repre-

sented, they are, but only as much as you can expect from a speaker this size.

When the UE Mobile Boombox launched it was priced at an atrocious ₹8,995 but soon it dropped to around 5k. The Go is priced at ₹6,999 to begin with so hopefully you'll be able to pick it up for lesser already. At the MRP though, it's recommended for someone who just does not want to carry something bulkier like the JBL Flip variants.

Siddharth Parwatay



Price
₹6,999



Features63
Performance.....77
Build72
Value65

Specifications

Dimensions: 12.5 cm x 6.5 cm x 6 cm; **Bluetooth:** 3.0 A2DP; **Inputs:** Aux 3.5 mm; **Other features:** Microphone; **In the box:** 3.5mm cable and carrying pouch

Contact

Corsair India
Telephone: 9845651608
Email: indiaservice@corsair.com
Website: www.corsair.com



Goodbye darkness

Lighthouse MV, high-tech sensors monitor power lines to detect outages before they even happen <http://dgit.in/OutageSens>



The next Blackbird

NASA has recently funded Lockheed Martin for an unmanned hypersonic spy plane capable of Mach 6.0 <http://dgit.in/LMSR-72>

Sony MDR-XB950BT headphone

Drop the bass

If it's bass that you are looking for, then you should check out the Sony MDR MDR-XB950BT wireless headphone. It has an over-the-ear design and comes packed with Bluetooth 2.0, NFC and large 40mm drivers. The ear cups have a soft cushioning with a faux-leather finish which is quite comfortable on the ears. The overall finish and design is quite premium and it feels sturdy as well.

The left earpiece houses the power button with an indicator LED, a bass boost button, the microUSB port for charging, a standard 3.5 mm audio jack, and the microphone. The right earpiece has the NFC chip, volume rocker buttons and a sliding button

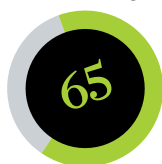


for attending calls and skipping tracks.

Frankly, the sound quality is not very impressive as the drivers have been tuned to give a high bass output. Even when you connect the headphones via an auxiliary cable, the output is still quite high on bass and you need to tinker with your equalizer settings to bring it down. Do think twice when you hit the 'bass boost' button as it completely overpowers the mids and the treble. You can attend calls from the headphones when connected to your smartphone and overall sound quality is quite good.

In terms of battery life, you can get about 15 hours of usage after charging for about 2-3 hours which is quite decent considering the large size of the drivers. The headphones are perfect for someone who like to go high on bass, but for those who prefer a more crisp and flatter sound profile should probably skip this. But with such a high price tag, you don't get the money's worth.

Kunal Khullar



Features	75
Performance.....	60
Value	45
Design	78

Specifications

Bluetooth: 3.0; **Drivers:** 40mm (3-28 kHz, with cord); **Weight:** 280gms; **NFC:** Electronic Bass Boost circuitry; **Battery life (Approx):** 20 hours; **Passive operation with auxiliary cable;** A2DP support.

Contact

Sony India
Phone: +1800 103 7799
Email: NA
Website: www.sony.co.in

TP-Link Archer C20i AC750 Wireless Router

Another entrant in the affordable wireless 802.11ac market

Affordable 802.11ac routers are becoming more and more commonplace these days. The Archer C20i is the scaled down version of the C2 with the key differences being that the C2 has Gigabit Ethernet ports and adjustable external antennae. The Archer C20i has three internal antennae near the top of the device while the entire circuitry is towards the bottom. This coupled with the fact that the ports are also situated near the bottom makes this router quite stable i.e. not prone to toppling off so easily. The front panel of the device has a nice glossy plastic finish with the indicator LEDs



sitting at approximately in the centre of the bottom half of the product. The placement of the power, WPS, Wi-Fi radio switches and the USB port are in an easily accessible location. The device does not come with wall mount.

We managed to squeeze out approximately 250 Mbps on the 2.4GHz band and 360 Mbps on the 5GHz band. However, the 2.4GHz stream wasn't as stable as the 5GHz stream which hardly ever showed any major undulations during the throughput test. When pinged wirelessly the device did have a very fluctuating response. So we wouldn't recommend gaming on Wi-Fi.

At the heart of the device lies the MT7620A which is also present in the C2 but the C2 has GBe ports aside from the external antennae. So if the price difference isn't considerable then we'd pick the C2 over the C20i.

Mitbun Mobandas



Performance.....	65
Features	58
Build Quality	61

Specifications

Wireless LAN Chip: MediaTek MT7620A+MT7610E; **Memory:** 64 MB; **Protocols:** 802.11 b/g/n/ac; **Bandwidth:** 750(433@5GHz+300@2.4GHz) Mbps; **Ethernet:** 4x LAN, 1x WAN, 10/100 Ports Without modem; **Warranty:** 3 years.

Contact

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Aliens in UAE?

UAE's new building for environmental management looks no less than an alien spacecraft, docked in the middle of the desert <http://dgit.in/AlienStruc>



Salmon shooting

Whoosh built a cannon system that shoots off Salmon over a dam. Here's to the future of ecological conservation <http://dgit.in/Whooshh>

Bazaar

iBall Slide WQ149

A decent enough tablet that's hampered by poor design

Microsoft's vision for its Windows platform is a bit, well, fuzzy. Windows 8 and the Surface series of PCs/Tablets were designed with "work" tablets in mind, to create a device and platform that was as good for work as it was for entertainment. The initial Surface RT devices failed because they seemed to represent the worst of both worlds, presenting users with a cross between a somewhat more powerful netbook and an app-less tablet that only really offered Word and IE.

What those devices did bring, however, was incredibly good design. Despite their many flaws, the Surface series is among the most thoughtfully designed tablet PCs available today and you do have to commend its design.

The iBall Slide is, in a way, the antithesis to the Surface's design. By itself, it's a good enough tablet. For ₹25,000, you get an Intel Bay Trail powered device with a nice screen, decent speakers, Windows 8.1 and a nice touch screen. You also get a nice pouch to carry the device, and a charger as well.

On the downside, you only get 32GB of HDD space, 10GB of which is hogged by your OS, a micro-SD card reader (so you can't plug-in your camera's SD card) and a micro-USB port (with full-size adapter), along with a keyboard cover, which is what this device is really about but isn't very good.

While using the device as just a tablet, browsing and watching movies, it seemed fine, only really suffering from the problems that Windows 8 itself presents rather than any issue with the hardware. 20GB of usable HDD space is very low, but if you're used to tablets and mobile devices in general, you won't notice the shortfall since it's not meant to be a primary computing device anyway.

It's when you decide to actually start working on the device that the frustrations begin. Firstly, the keyboard cover is awkward. It's been designed to envelop the device, but only latches on in the middle via a magnetic clip not unlike the one on the Surface. The problem is that both sides hang free and neither of them latch onto either the front or the back of the tablet. To compound this problem, the rear flap is hinged at two more points diagonally, meaning that you can never hold the cover flush against the rear of the device.

The keyboard itself is actually quite nice to type on, but while the Surface managed to find an elegant solution to "lapability" (working with the



device on your lap), the Slide's solution is clunky, fiddlesome and rarely worth the effort, while also being limited to one angle.

If you're familiar with an iPad's cover, opening and closing it unlocks and locks the device. This isn't the case here and this is a serious problem because the power button sticks out the side and is easy to press, resulting in the device turning on randomly even while in your bag. It was this same problem that caused the device to overheat badly and the battery to discharge completely on more than one occasion.

Speaking of the battery, our tests were entirely inconclusive. The device gave us battery life ranging from 2.5 hours to five hours at max. brightness (PCMark 8 Work test) and this was never consistent. Going by the results however, we can estimate a battery life of at least 3-4 hours for regular use.

Worse still is the implementation of the USB port. Half the reason anyone would want a Windows-based tablet is for the freedom that it offers, but with only one micro-USB port (USB 2.0) and virtually no on-board storage, you have to carry around the adapter if you want to plug in a USB drive or HDD. If that wasn't enough of a problem, the device takes forever to charge and even then, charges via that lone USB port, rendering it useless for everything else.

The iBall slide is a great example of the power and flexibility of Intel's BayTrail platform, but it also underscores the need for good design. Till the more serious flaws in its design are fixed, particularly with regards to the keyboard cover, we just cannot recommend this device.

Anirudh Regidi



Features	57
Performance.....	75
Design	30
Value for money.....	45

Specifications

CPU: Intel Atom Z3735D;
RAM: 2Gb; **HDD:** 32GB;
Display: 10.1" @ 1280x800;
Battery: 31.8Wh; **3G**
Network: WCDMA 2100MHz
(Data only); **Connectivity:**
Wi-Fi 802.11 b/g/n. Micro
USB, Mini HDMI, **Bluetooth**
4.0, Pogo Pin k/b interface;
Misc: One year, one user
Office 365 license with 1TB
SkyDrive space

Contact

iBall India
Phone: 022-67745100
Email: NA
Website: www.iball.co.in

Win at \$\$\$\$

Spot the best deals and save like a boss. We even show you how to make some money the easy way

Win at comfort

Ergonomics goes a long way in keeping you up and running. Understand how to design the best possible furniture for your gadgets.

WIN AT Productivity

Being more productive might have always been on the top of your new year's resolution every year. Finally here's a cheat sheet on how you can achieve it.

Abhijit Dey
abhijit.dey@digit.in

Productivity has always been about being more efficient, rising above the banal, and doing things quicker or smarter. Ironically it's technology itself that sometimes keeps us from being productive. For all its promises to make things simpler, sometimes technology itself clutters and complicates our lives. How do you then focus on things that are important? How do you do things quicker? How do you stay organised so that you can use your time more efficiently? With technology of course! The year 2014 saw many services and devices, that gave your life a new meaning,



getting more things done in lesser time. Looking forward into the new year ahead, we look into such services which will certainly make you more productive and efficient in your everyday lives.

Declutter your life

To begin with, we will have a look at how you could tidy and clear up all the mess that might have accumulated over the years in your digital life. It's time to dust away the proverbial cobwebs and start getting to the important stuff.

Filtering your social accounts

Social networks have become an essential part of your life, be it personal or professional. You might be an avid user of Facebook, Twitter, or Instagram, the sin of blindly adding numerous friends on social networks might be getting to be bothersome right about now, filling up your News Feed and mind space alike. Fear not though, there is a way to filter them out. For Facebook by simply clicking on the top right corner of a post, you can hide them from your news feed and even unfollow people (without letting them know, yay!), finally cleaning up your valuable News Feed. For the ones who use Twitter and Instagram, a service called JustUnfollow, lets you manage your followers and unfollowers (heartbreaking aren't they) on both the social accounts. Though it can be done manually, it becomes really difficult when you are following people in the hundreds. Brands that rely on social media accounts for their business should definitely use this service. The service gives you a list of non-followers, recent followers and unfollowers, inactive users, and much more.

It will ensure productivity by giving you an option of unfollowing irrelevant accounts you might have followed once.

Just Unfollow: <https://www.justunfollow.com/>



Delete yourself from useless services

Excited about a web app or service that just launched, you instantly sign up and don't bother whether in the future you would be able to delete that account.

For the ones who are quite sensitive about their private data on the web, a service that lets you delete yourself from the plethora of websites that you had signed up to is the need of the hour, and JustDeleteMe is what you're looking



One place to delete them all

Industry connect

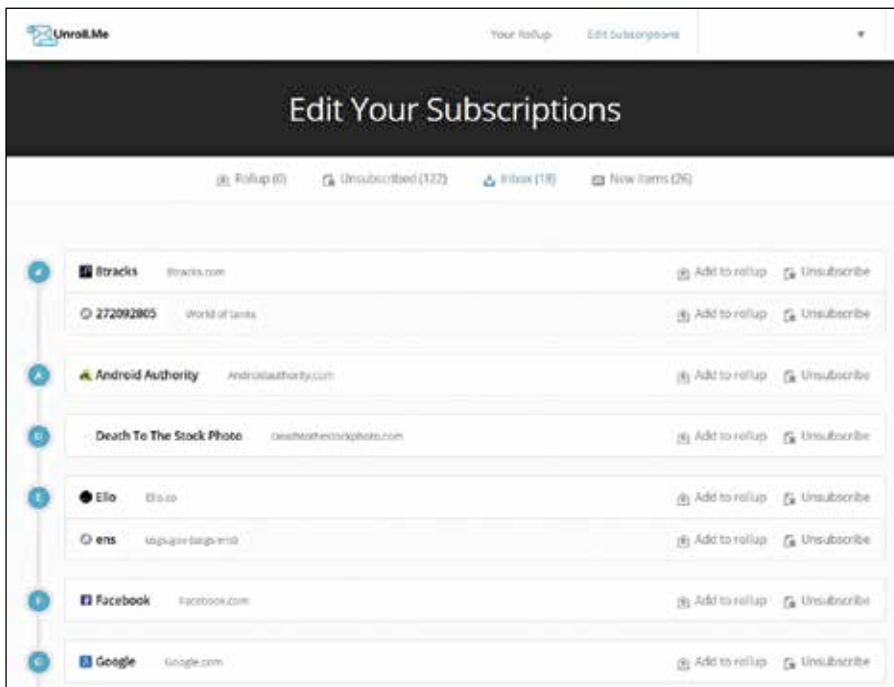
This month we talk to some big wigs from Ford and Autodesk. Be sure to check out this section to get a unique perspective.



LG WiFi speakers

LG has announced new WiFi speakers that will start playing automatically as your phone gets near <http://dgit.in/WiFiSpeaker>

Feature



Use unroll.me to quickly get rid of junk mail

for. When you visit the site it displays a list of all the popular and not so popular sites on the web, with lists where you can delete your accounts. The service also colour codes the sites, where green is easy to delete, yellow is medium, red is difficult and black is impossible.

Just Delete Me: <http://justdelete.me/>

Managing email subscriptions

Long ago you had subscribed to an amazing newsletter that gave exciting offers. But the subscription no longer sends you any offers that matter to you. There might not be just one subscription but actually hundreds of other newsletter subscriptions, flooding your inbox with annoying notifications every hour. UnrollMe prepares a list of all your subscriptions, after you sign up, and lets you select which ones you want to stay with and those that you want to unsubscribe from.

Unroll Me: <https://unroll.me/>

Stay organised

Once you're done cleaning up, it is time that you start getting organised on how you carry out your everyday tasks. Technology can certainly help you in this area

Making notes and to-do lists

The first step to getting organised is very clear, you need to plan each day out, and what could be a better way than creating a to-do list. There are many apps to offer this need, but we found Google Keep to possess not many but the essential features for note taking and creating to-do lists. You can have normal text notes, lists with checkboxes, voice and photo notes and even reminders, in a minimalistic interface. It is available on Android and also has a web application.

Link: <https://keep.google.com/>

Doing emails better

In our busy lives, most of the day revolves around email, which becomes cumbersome if not handled efficiently. There are many ways to make it seem less of a task and also making it smarter by using add-on services like Boomerang, that lets you schedule and track your email. If you're looking for more services to better manage your email, Gmail especially,

head out to the Labs section under settings where you'll come across many plugins like Multiple Inboxes, Undo Send and more. Email clients do offer more services, where Gmail provides you with most of them, but for other email users and the enthusiastic kind, you can give Mozilla's Thunderbird for a spin.

Boomerang: <http://www.boomerang-gmail.com/>

Thunderbird: <http://dgit.in/MThunderbird>

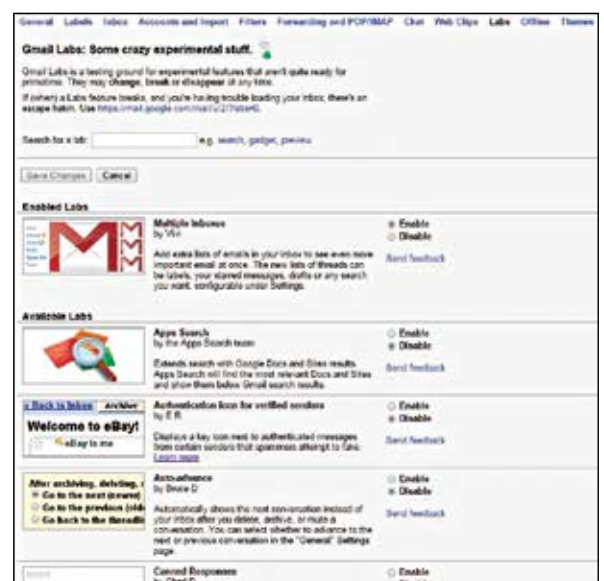
Saving links for reading later

When you're on your way to work or simply reading the morning news online, you always stumble upon interesting articles that are too long to read for the moment. You might shout out bookmarking as a solution but the problem here is that they are restricted to browsers only. Pocket (previously Read It Later) lets you save web pages so that you could read them later, and the distinguishing feature here is that it has been integrated to hundreds of apps and services. So, if you come across an article on Twitter or Flipboard, you can add the links to your Pocket after giving it access. Quite handy for people who keep flipping through stories online.

Pocket: <https://getpocket.com/>

Tracking time spent on apps and websites

It would be really difficult to guess the amount of time you spend on certain



Experiment a little. It's worth it.

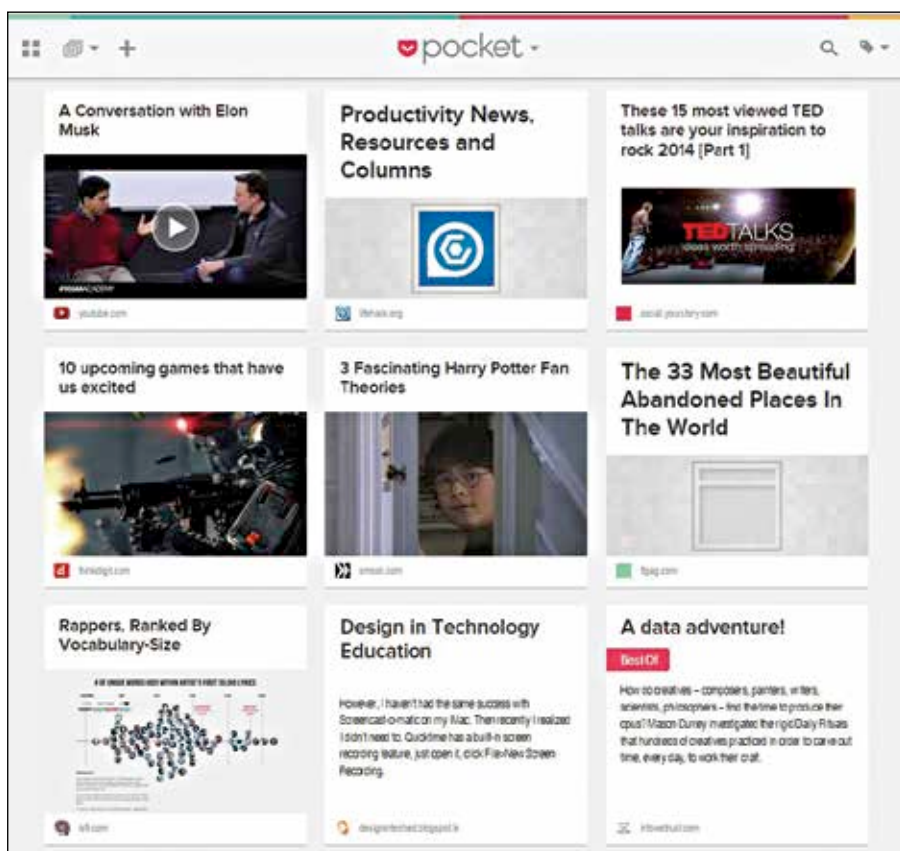


3rd-party ban

Microsoft has removed all the third-party apps for Snapchat from the Windows Phone Store
<http://dgit.in/SnpchatClone>

3D Printing win

3D printing is working wonders in almost every field and now helping a dog run again
<http://dgit.in/3DPntLimb>



Yes we all know about Pocket but you can't underestimate how useful it can be

websites and programs installed in your system. RescueTime accomplishes that, running in the background, tracking your time spent on applications and websites. It sends you weekly detailed reports of your daily activity, enabling you to discover where you are losing productivity.

RescueTime: <https://www.rescuetime.com/>

Focus better

Distractions can find you anywhere, and thankfully there are certain services that help you in ignoring them and focusing better on your work.

Block useless websites temporarily

You tend to drift away from work when you're connected to the internet, ending up wasting your precious time. StayFocusd is a Chrome extension that gets really serious on making sure of that by blocking a specified list of websites temporarily for a specified time. The Firefox alternative LeechBlock also does the same job, reminding you to get your job done.

StayFocusd: <http://dgit.in/StayFocusdCh>
 LeechBlock: <http://dgit.in/LeechBlockFr>

Time your focus level

You cannot maintain focus for a very long time, only because you're human. Work can be made more productive if they are carried out while you have you are focused. To help you in managing focus on certain jobs, Focus Booster is a simple application for your desktop and mac that has customizable timers, letting you divide your work and



Time yourself and your breaks

completing them more efficiently.

Link: <http://dgit.in/FocusBoost>

Read better online

You do love reading articles online, but aren't really happy with the ugly links and images surrounding the article. Enter Evernote Clearly, which lets you clear out everything and just present you with the main content that you solely wanted to read. It has additional features too and is available as an extension to both Chrome and Firefox.

Link: <http://dgit.in/EvernoteC>

Extra takeaways Pomodoro Technique

To boost your productivity, you can use the Pomodoro Technique that involves breaking down work in short intervals of time called "pomodori" and taking breaks in between. Traditionally, bursts of 25 mins followed by breaks of 5 mins are followed using a timer. After four pomodori, you can take a longer break. Religiously following this technique certainly makes you more efficient eventually.

Listening to Music

Yes, after a considerable amount of studies, it has been proven that listening to music does increase your productivity. Obviously the genre of music matters on the type of work you're doing, where classical music goes for work involving numbers and attention to detail, ambient music for work that needs accuracy and solving equations and pop/dance music when you're doing a data entry job or proof-reading.

Reducing eye fatigue

Staring straight into your screen all day and especially at night could have harmful effects on your eyes in the long run and also affect your sleep cycle, making you unproductive the next day. This is due to the blue light emitted from screens, which can be reduced by either wearing filtered glasses, placing a warm filter over your screen or by simply installing the f.lux app. It adjusts the screen warmth according to the time of the day, keeping your eyes healthy as they are.

f.lux: <https://justgetflux.com/>



Australia wins yet again!

HWBOT's Country Cup also known as the World Cup of Overclocking is done and Australia defended their title by winning all stages. http://dgit.in/OC_WorldCup



Oil cooled PC

Ever wondered how can you use mineral oil to cool your PC? If yes, then watch this video and get inspired: <http://dgit.in/OilCooledPC>

Feature



Saving and making money

Put your wallet on a high-fattening diet with these handy tricks

Mithun Mohandas

mitbun.mobandas@dgit.in

Unless you've renounced the material world and vowed to devote the rest of your time meditating in the Himalayas, you are concerned about saving money. And we aren't talking about using coupons because that's too commonplace in this day and age, not to mention that it's been done to death. We're taking it a bit further so you might have to put on your thinking cap for this one. We've also covered some really easy ways to make some money on the Internet with relative ease. While following these steps might not earn you enough for you to give up your day job, it is by no means loose change.

Saving Money

Chrome extensions

Price comparison websites aren't the only way to get a better price. There are numerous browser extensions available, some of which were created by these comparison websites themselves. And now that International Shipping has become a lot more affordable you should start looking at extensions that check International sites as well.

Invisible Hand, one of the first extensions is still around and continues to do a great job. In fact, some of the extensions

that cater to the Indian audience is based off this particular extension. Some of the deals might be so good that even with shipping and taxes it still ends up cheaper than getting it locally. Warranty, however, might not be honoured on such purchases.

BuyHatke is the most popular browser extension for Indian sites. It shows you alternative sites with better pricing and even digs through a site's pricing history so that you'd know if the deal is actually a good one or one that's been preceded by a price hike.



So is it really a good deal?

discounts greater than usual but the site is less likely to bring such results to the forefront since these discounted products offer lesser profit margins. But for you, the customer, it's the best darn thing. Take this URL for example which is from Amazon UK (<http://dgit.in/AmznExmpl>) that has been modified to list out products which are listed at 90-100% discount. Unfortunately, changing .co.uk to .in at the beginning doesn't help. Some of the sections of the URL are specific to the UK site, so if you were to figure out the right keywords for the Indian site then you'll have hit the jackpot.

The careless seller

People make mistakes while putting up items for sale. The careless seller is the careful buyer's best friend. Let's say you're on the lookout for a gaming mouse. You might not find all the results if you search using the exact terms -



Manipulate to save

Open up a product page on one of your favourite shopping websites. Take a gander at the URL in the addressbar. Copy it to a good text editor like Notepad++ and set the language to XML. Immediately a few things are going to pop out - keywords, minimum and maximum parameters, category codes, modifiers like discount tags etc. You can see where this is going.

Most of the online shopping websites are in fact platforms for multiple sellers and some of these sellers may offer



Machine made candy

Everyone loves candy but do you know how it's made? Check out this sweet video to know how: http://dgit.in/Mak_Candy



TIL: Gift wrapping

We've all been through a time when we had to gift wrap irregularly-shaped objects. We wish we had seen this first: http://dgit.in/GiftWrap_Boss

“gaming” and “mouse”. Searching using the word “maus” or “mose” is likely to throw up a few results. The icing on the cake is that since lesser number of people are going to come across these the CMS is less likely to jack up the price dynamically. Moreover, if this were to be an auction then there'd be less bidders which means the price wouldn't shoot up tremendously as it would on a properly typed out listing.

<http://dgit.in/TypoHnd> and <http://dgit.in/FatFing> are two websites that allow you to list all the common typos based on a keyword and then gives you a compounded search link with all of the typos. This saves a lot more time since you don't have to manually type in each possibility and reload the page.

Another thing to keep in mind would be to not constrict your search with too many filters. We know that filters are a boon for hunting down exactly what you

database directly. This means you can create a site that is very lean and loads way faster than the actual site.

Cosmetic scripts involve those which can colour code items in the listing based on custom filters and so you don't have to go through each and every entry. There are also scripts that remove all unnecessary elements from a page. However, ever since Userscripts.org has tanked, it has become quite difficult to hunt down these scripts but a little bit of javascript coding is all you need to come up with your own scripts. Check out this link to figure out how to hunt down keywords with greasemonkey (<http://dgit.in/KeywordGrease>).

Monitoring multiple auctions and bidding on them can be quite taxing on your mind. To lessen the burden there exist multiple tools which are paid as well as free. Gixen (<http://dgit.in/Gixen>) is a free service that manages your bidding for you. Simply login and enter what all

Wishlists

These serve a dual purpose. One is that stores will notify you whenever products on your wish list are slapped with a discount. The other advantage is that friends and family who've gone through your wishlist



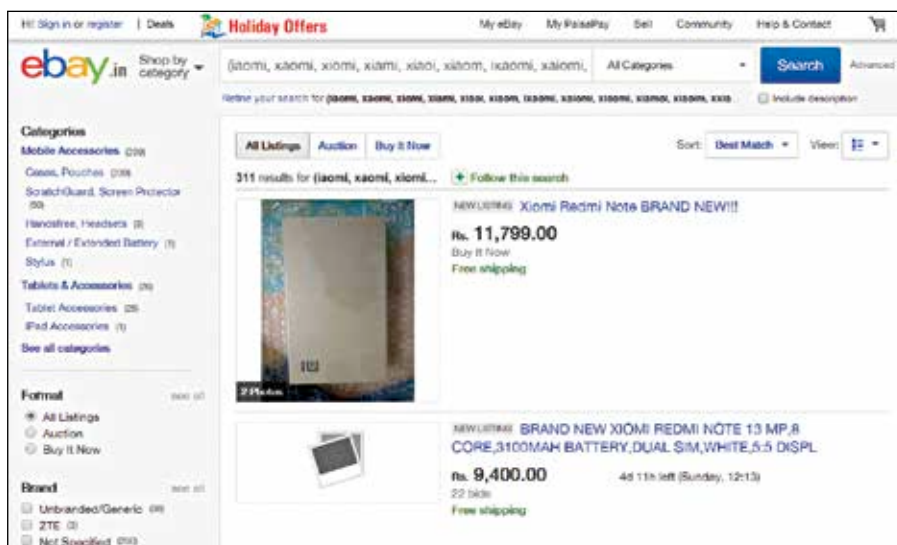
Others can help you with a wish list

could either let you know of a good deal on some other store or even buy it for you as a gift. Either way, you're saving money.

Instant notifications

Now that you have a good idea about how to snag good deals you need to worry about actually purchasing the product. Nobody spends the entire day in front of the computer actively searching for deals unless that's what your job is. So you need a system in place to notify you of the best deals. This is where IFTTT (If This Then That) comes to the rescue.

Let's say you've found a great site for the best deals and you're on the lookout for an Android Wear device. You now wish to be notified on the go (via SMS or via a notification) about any good Android Wear device that pops up on the deals site. We're assuming this site has an RSS feed (Eg. Desidime). In IFTTT, you can use Feed Rinse to filter multiple RSS feeds for certain keywords. And then you activate the SMS or Pushbullet channel on IFTTT to send to an SMS or a notification to your mobile phone. All that remains to be done is to create a recipe on IFTTT that triggers the SMS or Pushbullet service the moment Feed Rinse comes across an Android Wear listing on any of the deal site's RSS feeds. This method can also be used to notify you if a product that you've been looking out for suddenly pops up on eBay. Check out this link (<http://dgit.in/WinWithIFTTT>) which uses the same recipe to generate notifications for a filtered set of news articles.



Typing mistake = profit!

want but when sites make mistakes and wrongly categorise something then you're going to miss out on a few listings.

Enhance your auction experience

When it comes to online auctions the only one that comes to mind is eBay and since it has a global presence you have a lot of people fiddling around with the site either by using scripts that produce cosmetic changes or by using the eBay API to tap into the eBay

items (the previous section should help you shortlist some really good ones) you wish to bid on and the maximum amount which you are willing to bid on that particular product. Gixen steps in towards the end of the auction period and snipes it. It even has a mirror site which comes as a paid service. This makes it equivalent to two people sniping a particular auction. Gixen's forum is full of testimonials from folks who've saved massive amounts by sniping auctions.

Laser for reference?

Chinese scientists fired the Mianyang Laser into deep space to provide an accurate reference point to calibrate a telescope. http://dgit.in/PewPew_Pew



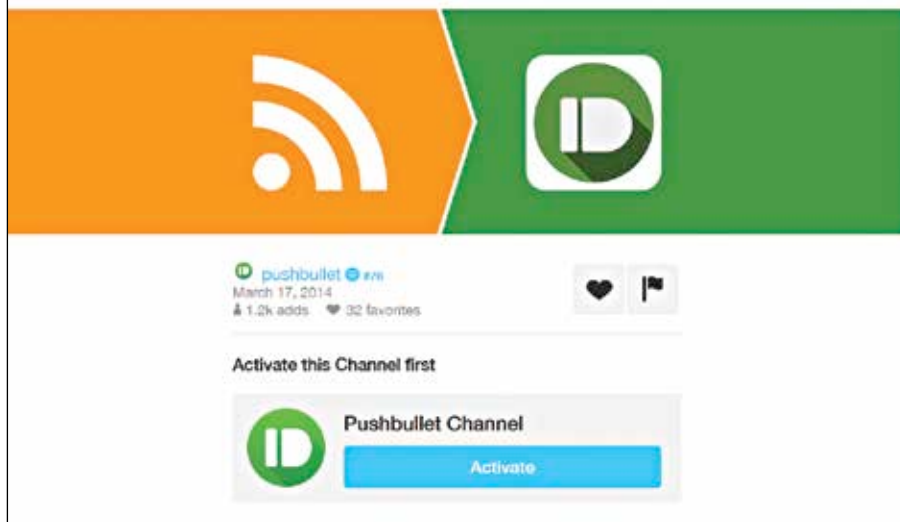
Keyboard Waffles

We love waffles, and a kickstarter project to make a keyboard shaped waffle has passed its goal <http://dgit.in/KeyboardWaff>

Feature

If new Humble Bundle announced, then send me a link

4 Browse Recipes



Get notified whenever a good deal pops up

Making Money

Teach a language

Those Sanskrit lessons that your mom made you take up in school are about to pay off. It's no secret that you can monetise your knowledge by teaching someone but there



Teaching pays pretty good

weren't platforms that bought a student and a teacher together. Now there are. italki is where you can sign up to teach or learn a language. Signing up to be a teacher is simple, you can set up a profile and wait for someone to approach to you. You then schedule a time slot and the teaching begins. There is a feedback system where your students rate your abilities which if positive would attract more students.

If you build up a good reputation, you can easily earn anywhere between ₹900 to ₹2000 with some teachers charging ₹4,000 per hour. Obviously, italki takes a cut which is currently 15% of your hourly rate.

Take up freelance jobs

We don't need to go into much detail over this one. Everyone has some skillset or

the other which can be monetised. In the previous section, we looked at monetising your language skills. There are sites like Freelancer.com and Elance where you can find some task or the other which is ridiculously easy for you to take care of and you get paid for it. However, it's a seller's market. Jobs are posted with a mention of how much the job poster is willing to pay and people bid on the posting. Whoever bids the least does not necessarily get the job, instead the job poster has full control over who gets assigned so any referrals that you'd have got from previous assignments makes you a more reliable assignee.

Amazon runs a similar service called Mechanical Turk which is a crowdsourcing platform for HIT (Human Intelligence Tasks). Though not as diverse as Freelancer,



There's something for everyone

MTurk is no small fry. It gives a job poster the option of having prospective assignee pass a test before being given the job.

It's Flipping time


Flipping refers to the process of buying something that can easily be sold off for a profit. This is a high risk method of making

money, the risk being that you might never sell a product to cover whatever you've invested. Take for example the recent exclusive sale phenomenon that many shopping websites have started. The Xiaomi Mi3 was available only on Flipkart and it has great hardware for the price. So the limited quantity and the whole lottery mechanism around it made it difficult to obtain. This meant that a lot of people were willing to pay a little extra to buy it from elsewhere so you had people buying the phone just so that they could auction it later. Some of these units sold for as high as ₹24,000 which is ₹10,000 more than the official price.

Step one in Flipping is to find something you can easily refurbish. eBay has tons of products which sell for a fraction of its original price because it is no longer functional. A mobile might not turn on, or an XBOX 360 has the RROD. A simple Google search tells you that flashing the mobile might bring it back to life and changing the heatsink on the CPU of the XBOX 360 is likely to fix the RROD. The expenditure involved in fixing either product is minimal and selling it would net you a decent profit.

If you are unsure about a certain item then there are plenty of forums where you could ask how much people would be willing to pay for it. And since these are the opinions of those who regularly flip items, it's a better estimation than the prices you'd find elsewhere. But be careful, it's quite likely that they'd swipe that product for themselves.

Once you've fixed it, all you have to do is figure out how to market it and how to price it so that it sells for a profit and sells quickly. Trying to maximise profit by playing the waiting game doesn't work out often. So you need to set a price that covers the cost price, shipping, taxes and all expenditures involved in flipping it.

We've essentially covered all the aspects of shopping online from finding the best deals, being first in the shopping queue and even sneakily sniping that auction at the last moment. Needless to say, you're going to save an awful lot of money with the aid of technology. Also, you're going to be earning quite a bit on the side too. You can thank us by shooting us an email and letting us know how much you saved. 



Curing infertility

Stem cells have many benefits, and now scientists are researching jointly from UK and Israel to cure infertility <http://dgit.in/InferStmCell>



Portal Basketball

Basketball is fun, but Portal basketball? Out of this world! <http://dgit.in/PortalBasket>

Technology and Ergonomics of Productivity



Win at productivity by learning about ergonomics and how can it be beneficial to your workplace.

Siddhant Sharma

readersletters@tbinkdigit.com

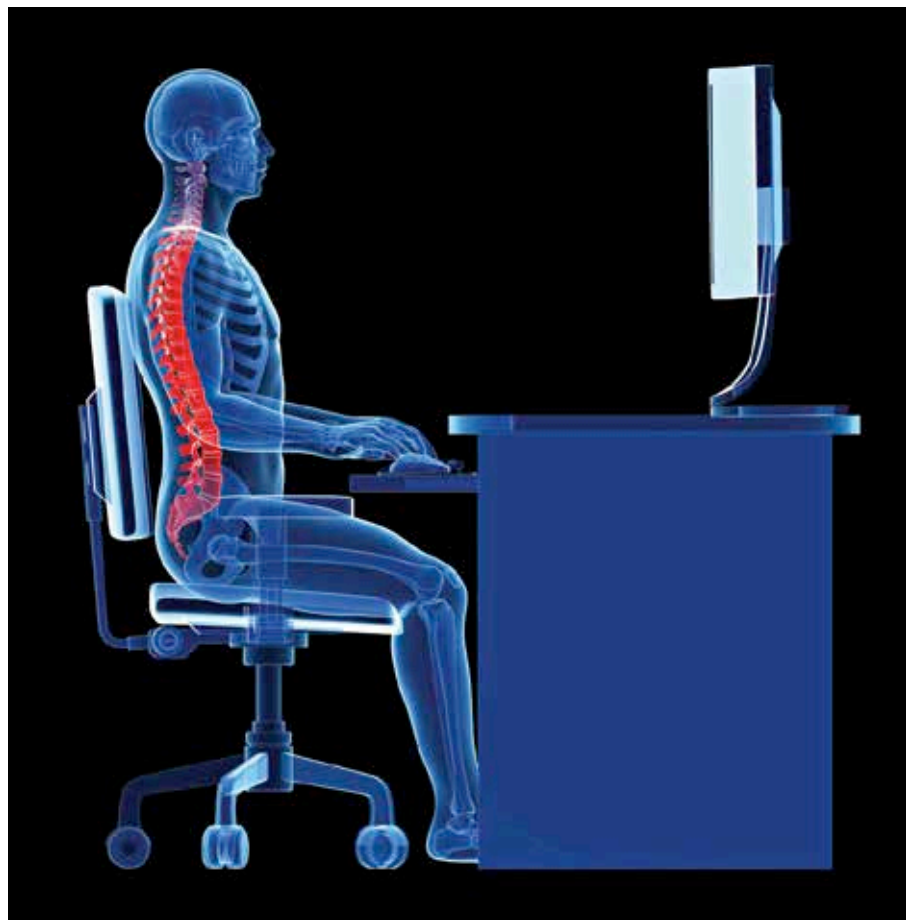
Introduction

We humans have an inherent tendency to search for comfort in everything we do, be it work or play. It is this tendency that is single-handedly responsible for the change in our moods and thus reflects in our work. Since comfort matters to us so much, it is only logical to deduce that comfortable people are happier and as a result better at whatever it is they may be doing. But the problem we face currently is that comfort is hugely neglected at the place, and where do people spend most of their time? Yes, at work.

Work is where we need to be on our A-game both mentally and physically but when you take the pillar called comfort out of the support structure of employees by making them use improperly designed furniture such as uncomfortable chairs for example, they're bound to get tired, and automatically are less productive. Plus there could be adverse effects to their health, which results in even more loss of productivity.

This is where anthropometry comes into the picture as it helps in ergonomic and industrial design by letting ergonomic furniture manufacturers design products that are perfect as far as the distribution of body dimensions go.

Repetitive Strain Injury or Work-Related Upper Limb Disorder is a growing concern in workplaces and although we do have the labour act which lays down specifics of health related concerns for



How you sit at work and how comfortable you are affect your productivity

workers, it isn't very extensive or aggressive when it comes to actually enforcing health and safety, or making sure that companies use a certain standard quality of ergonomic equipment for employees.

This is why, you need to think about ergonomics and invest in appropriate equipment or modify existing processes

in your workplace. So let's see how ergonomics necessary in the workplace? What are the puzzle pieces that make it important and how should we go about fixing them. Also, what kind of options are currently available to improve productivity of the employees as far as ergonomics is concerned?



Hydrogen flagship car

After its first hydrogen car, Toyota is reportedly working on building a higher, hydrogen fueled Lexus LS limousine <http://dgit.in/ToyotaLimo>



Tesla Roadster upgrade

Elon Musk announces that the Roadster upgrade will be able to travel 400 miles on a single charge <http://dgit.in/TeslaUpgrade>

Smart SoHo

So what's all this about ergonomics anyway?

Also regarded as human factors, ergonomics is a certain scientific discipline observed with the understanding of human interactions and thus applies the use of anthropometric data in order to design objects or processes while keeping human well-being and performance as its focal point. Basically, ergonomics is completely about designing stuff better for people, so that their interaction with products and processes enhances or complements them in a way that it improves their efficiency while not forcing them to adapt to these products or processes. In today's day and age, ergonomic design is of great importance as better designed products reduce unnecessary strain and help to keep our health in check while keeping us happy and productive.

Benefits of good ergonomics in a workplace

It's often said that "A happy employee is a productive employee" which is true in every sense as good ergonomics can go a long way in keeping people engaged and satisfied in their work. There is often the misconception that investing in ergonomically designed products or processes is extremely expensive and would do little to boost company profit or overall output of the company. Not only does ergonomic improvements in the workplace make it a happier and healthier environment, it also reduces unnecessary costs related to health and safety. Let's see some of the immediate benefits of good ergonomics:

- **Improved employee engagement:**

When a company is making visible efforts to improve health and safety of employees, it becomes easy for employees to notice these efforts and so they're motivated to engage more with their work. Ergonomic workplace design can be very influential in stimulating collaboration while also promoting learning. Efficient

collaboration of employees is the key to the success of any organisation and if ergonomics can help in balancing the "we" and "me" aspect of the workplace, it sure makes sense to invest in well-designed workplaces.

- **Reduced costs:**

According to reports from the Indian Council of Medical Research (ICMR),



An ergonomically designed chair from Herman Miller called Mirra 2

there has been a steady rise in the number of people making use of health services because of Musculoskeletal Disorders or MSDs and most of these people are working professionals who are victims of Repetitive Strain Injury. If a company reduces ergonomic risk factors in its offices or work environment, it can easily save its expenses on medical compensation for employees. A one time investment on ergonomic improvements in the workplace can thus save up a lot of money on recurring health related

expenses over a long term and is thus a beneficial investment.

- **Decreased health issues and a better safety culture:**

Good ergonomics in the workplace are directly responsible for decreasing repetitive strain related health issues which will help in keeping workers or employees healthy and lessen absenteeism from work. Also, a well designed workplace boosts employee morale and promotes healthier and safer work ethics.

- **Improved productivity and quality of output:**

Bad ergonomics increases fatigue, and fatigued people get frustrated and don't work at their best which can directly relate to a drop in the quality of their output. Improvement in productivity is one of the major advantages of ergonomics and this reason alone should ideally be enough for upgrading your workplace. Better ergonomic solutions will allow for better comfort, good posture, decrease unnecessary exertion and automatically make a person more efficient at work.

How can you transform a workplace to improve ergonomics

Transforming a workplace to better ergonomics starts primarily from creating and designing a job to fit the employee instead of forcing him/her to adapt to the ways of work. Apart from this, there are a few steps that you can follow to improve ergonomics to create a more productive workspace.

- **Identify risk factors:**

Take an account of your entire workplace and thoroughly identify the existence of ergonomic risk factors. Once you're done with that, broadly categorise and differentiate them into risks associated with force, instantaneous or quick motions, repetition, awkward postures, static postures, stress from prolonged contact and also variation in temperature.



LG HQ investigation

After allegedly sabotaging Samsung's washing machines at IFA 2014, LG is visited by prosecutors <http://dgit.in/LGHQIn>



WiFi everywhere

More than 600 buses and taxis in Porto (Portugal) have been packed with routers for free WiFi - <http://dgit.in/PortugalWiFi>

• Control risk factors:

Get professional help in finding ways to eliminate or control each of the risk factors identified. Redesign the key affected work processes to incorporate better ergonomics. This redesign can range from making simple adjustments like changing the arrangement or layout of office furniture to more vast changes like completely redesigning an entire affected work process from scratch.

• Embrace ergonomic design of workplaces:

If for example you've identified particular working risks associated with the current height or width of desks in the workplace, see whether you can address these risks by somehow increasing or decreasing the dimensions of the desk to meet ergonomic criteria. If you can't, then allocate a budget to get rid of this risk by buying better designed desks.

• Other changes:

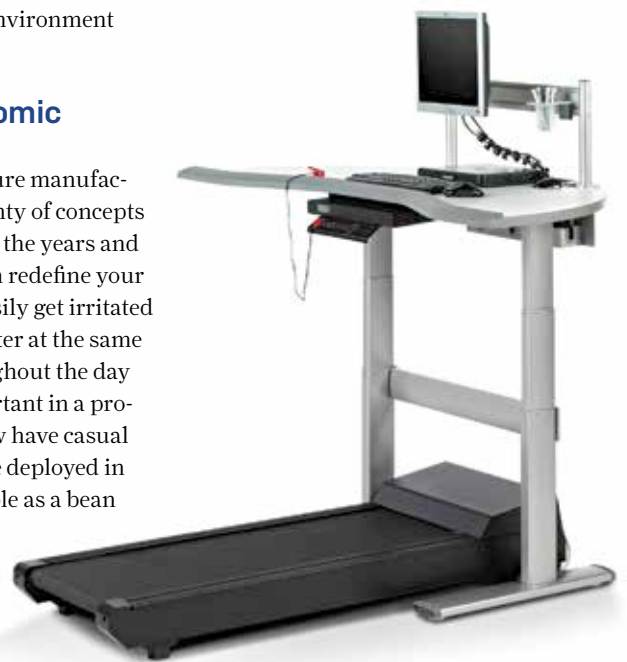
It doesn't end there as you can also improve a workplace by architecturally altering it to create open offices instead of individual cubicles. Research has shown that open offices improve employee collaboration. A bright environment or even natural lighting goes a long way in improving employee productivity as it is known that natural

light makes the work environment stress free.

Interesting ergonomic concepts

Various ergonomic furniture manufacturers have developed plenty of concepts for use in workplaces over the years and some of these concepts can redefine your workplace entirely. We easily get irritated sitting in front of a computer at the same spot while working throughout the day and since comfort is important in a productive workplace, we now have casual seating options that can be deployed in offices. Something as simple as a bean bag to even a technologically advanced room with casual seating that can be digitally booked or scheduled using a scheduling system like the Steelcase RoomWizard II and timed for use through the office network like these can help break the monotony of work and provide employees to think and work more freely while taking a breather and also provide an effective space for collaboration with colleagues.


If you have a small workplace and your employees have their designated cabins or rooms but they frequently go on business trips, the cabins that they use waste a lot of precious usable office space. With the advancement in technology, we now have



Get productive and healthy with the Walkstation

transformable and reusable cubicles made of panels that can be folded for sharing unused space thus making more room.

Then there are various ergonomic chairs like Gesture, Mirra 2, Zody and Generation available from manufacturers like Steelcase, Herman Miller, Haworth and Knoll respectively. Ergonomic chairs like these are highly customisable according to the needs of the user and are excellent for maintaining a good posture while working for a long period of time. Active seating options like the SteelCase Buoy that force the user to maintain balance while sitting are also helpful in keeping the employees active while working and helps to improve productivity. We now also have height-adjustable work desks for use while standing as well as sitting and these type of desks can make working on a desk-job more active. The Steelcase Walkstation for example is a height-adjustable active desk with a treadmill beneath it.

Employees are the largest and most important asset of any organisation and Stephen R. Covey once said that "Always treat your employees exactly as you want them to treat your best customers." And according to us, ergonomically transforming your workplace is the best place to start. 



A room scheduling system



Project Ara teased

The Spiral 2 board of Project Ara has been teased by Google's Advanced Technology and Projects group ahead of the Developers Conference. <http://dgit.in/Spiral2PCB>

Digital Licenses?

Iowa is planning on making driver's licenses an app in your smartphone! <http://dgit.in/DigDriveLic>

Industry Connect

Ford talks to us about smart cars

We had the opportunity to speak with Ford's Senior Manager of tech and business development and connected services in Asia Pacific about how in-car infotainment systems are getting smarter and more intuitive



Kunal Khullar
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Cars are gradually getting smarter, but it's still been a slow process. The in-car infotainment center is gaining importance inside cars and, from providing navigation routes to information about the nearest coffee shop, we are seeing a rise in smart consoles for your automobile. David Huang, Ford's Senior Manager of tech and business development and connected services in Asia Pacific, spoke to us about how Ford is working on bringing you a smart in-car console, and what that will mean for you.

d What is AppLink?

Huang: Ford realised that consumers are using their smartphones everywhere; be it messaging, social networking, videos and a number of other services. As a consumer you want to continue using these while you are driving and it has become a natural demand. We looked at all the issues, problems and the demands and came up with AppLink which is a technology that links the smartphone application to the vehicle. Essentially the app is still running on the smartphone but user interaction is done through the vehicle. So as a driver you don't have to use the handset, making the experience safer while still being connected to the world.

d What does AppLink offer other than connecting your smartphone?

Huang: AppLink also opens up vehicle data, and allows third party applications to extract data about the car itself, in a manner that is well controlled and user privacy is respected. Users are explicitly notified when an app is requesting vehicle data.

d What is your opinion on the adoption of smart in-car infotainment systems in the South Asian region? Do you think they have still got a long way to go when compared to Europe or America?

Huang: I don't think that Asian countries are far behind in adoption. I think the vehicle segments are totally different, US has a lot of SUVs and pickups and Europe has smaller cars and people in China

We have about 50-60 apps in the United States, in Asia Pacific we have close to 30

prefer big cars. In India its more of compact cars, thus putting a large system in a small car is not practical, it obviously goes with the vehicle. But the technology does not say that it can only work in big cars or expensive cars, it can work in all cars

▲ David Huang, Senior Manager – Technology & Business Development and Connected Services, Ford Asia Pacific

and it is just a matter of the positioning for each market.

d What do you think is missing when one looks at smart infotainment centers for automobiles in a country like India?

Huang: I think one major thing that is missing is an open standard, and Ford is on its way to promote that idea. We had announced that AppLink is open-source, last year, and open to all developers. Open-standards are important as they promote industry wide standards and today you cannot develop only for Android Auto or Apple Car Play. So, we are providing a solution for developers via the Smart Device Link.

We hope that other OEMs and car makers will adopt this in the future.

d How many apps are currently supported by Ford's AppLink system?

Huang: We have about 50-60 apps in the United States, in Asia Pacific we have close to 30, and in India we only have two, MapMyIndia and ESPN CricInfo, but we're working on increasing that number. We are working on something that will allow your smartphone navigation systems and maps to directly display on the in-car system. **d**

**Fireworks fly by**

Watch this amazing video of a drone capturing the Christmas fireworks
<http://dgit.in/DroneFireW>

**Jaasta keyboard**

A crowdfunded E-Ink keyboard that can morph its letters into shortcuts to match software you're using
<http://dgit.in/JaastaEInk>



Futurist Dr. Jordan Brandt on 4D Printing, the Indian Maker movement and more...

◀ Dr. Jordan Brandt,
 Manufacturing Technology
 Futurist at Autodesk

Siddharth Parwatay
siddharth.parwatay@digit.in

What does a "futurist" do exactly? Tell us about your Job at Autodesk

Jordan: I have an incredibly fun job, thinking about the future of designing and making things. At Autodesk historically we have been in the design and simulation space, and now we're quickly moving more into the manufacturing and construction side of things as well. I see all of these aspects converging, so my job is to look into this convergence, and that involves following a lot of trends. From robotics and automation to artificial intelligence, 3D printing, the Internet Of Things, all of these have influence on the way we design and make things.

Tell us more about distributed manufacturing systems, what exactly does that mean for regular folk?

Jordan: The idea is instead of having centralised large factories, we can actually distribute factories in a much smaller compact version and enable more local and regional production. An example of that would be Foxconn building their next largest factory in Indonesia. And it is not because the wages are cheaper or the regulatory environment is better, I mean those are factors, but the biggest reason is their next largest market is in Indonesia.

Also from the ground up you have things like the Maker Movement with increasing capacity for people to design and make their own things. You have 3D printing which gives you the technology to now design and make your own things. We see the convergence again from the large enterprise and from the individual maker communities coming together and all of this nets out at a more local design and production method.

Where do you see the Indian maker movement heading?

Jordan: Well, I think it's incredibly exciting now. This my first time in India, and just travelling around Mumbai for the last few days you see the resourcefulness of people. Whereas the wealth distribution seems to be skewed, the resourcefulness of the people is absolutely amazing. If you need something you can't afford to buy it, you figure out how to make it or how to modify something to enable you to solve whatever problem that you have at hand, you need to tap into that creative capacity, and a lot of that is access to tools. You don't basically need the formal education, that's what the internet's for right? You can learn the skill set you need. I would think that you guys are incredibly excited about the future of making in India, not to mention the fact that the needs of the people here are unique.

There's kind of been this truism since the end of the Second World War and Industrialization that industrialised economies produce a lot of the advanced products for the rest of the world. And the truth is that those industrialised economies probably don't know about the local needs in Mumbai, for example, so it makes sense for people to actually be empowered to make their own things.

We've been talking about 3D printing as the next big thing for years now, similar to the way people are talking about drones today but it hasn't become a household phenomenon yet. Will that ever happen?

Jordan: It will happen eventually, we have to give it time. I mean, you think of the typical hype cycle where we over-anticipate the growth and productisation of certain technologies, and about two years ago we hit the peak of the hype cycle around consumer 3D printing – that is going to be in every home and also these grand expectations. There's a lot of problems preventing that from happening today, one of them being the reliability of the hardware. Anyone who has a 3D printer knows that their reliability isn't there, the repeatability isn't there. Personally I have three 3D Printers, and two of them are used to make spare parts for the third one. Using them requires an Engineering or kind of troubleshooting mentality, which

VR Temple Run

Swiping away Temple Run was quite amazing on a smartphone, but will it be exciting on a virtual headset? <http://dgit.in/VirtTempRun>



Security upgraded

Following the series data breaches worldwide, South Korea has boosted its cyber security in nuclear plants <http://dgit.in/SecNucReactor>

Industry Connect

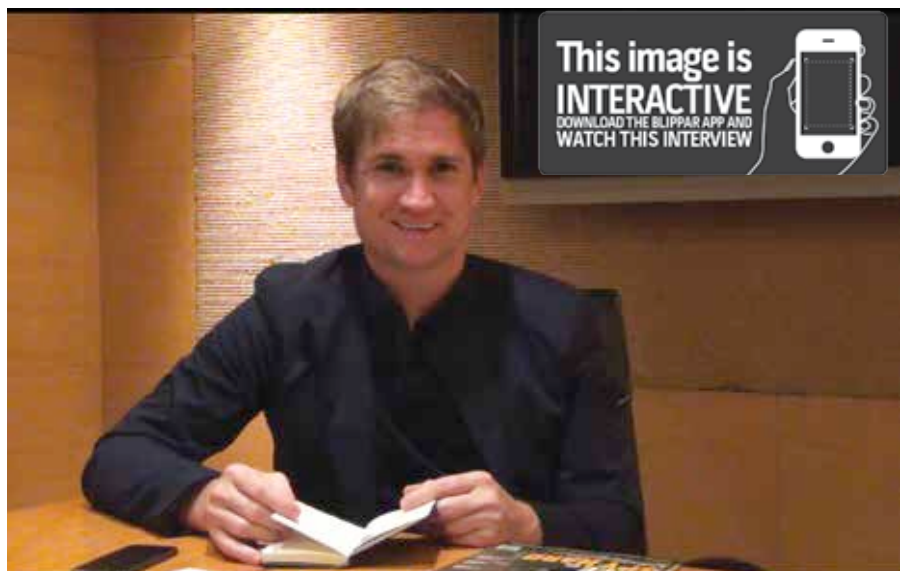
most people don't have the time to deal with. So the hardware needs to evolve.

What exactly is 4D Printing?

Jordan: The best analogy to 4D Printing is in biological systems. Essentially we ourselves are 4D printers right? We are built additively and we modify ourselves over time, so the precedent is biology and the living world. 4D printing in the modern sense is being able to additively manufacture components that can assemble themselves or modify themselves over time. You don't have static products now. Think of products that can move and adapt, not just in terms of their software interface but in terms of their physical interface.

Would the analogy go further? Would it be ok to think that such products would multiply as well as mould themselves as cellular organisms do?

Jordan: Let's say that they will at least modify themselves. In a certain case they may multiply if the need arises. Imagine that this table was a 4D printed object and it was made of smaller components and imagine suddenly you had a need in this room to have not one large table but five smaller tables then they could reprogram themselves to be five smaller tables, so in that sense, yes, potentially they can



objects that look amazing. Often times they look like something you've never seen before. So on the consumer side, I think technology is coming now, we have been restricted largely to fused deposition modelling and extrusion technologies and that will advance a lot, I mean there's post-processing and things that you can do to make it look better, to make it feel like a finished object, but there's always ways to embrace the fact that it is 3D printed and maybe this is a new aesthetic of objects that we should embrace. I

UV light and it's continuously extruding a form out of a liquid and the results are very high quality. It doesn't have the readable layers you typically see with FDM, you get very high precision, and you can make very small artifacts with it. We are actually printing hair with it. It feels like fur, that's the kind of resolution that we can get. So as new technologies come online, some of the perception of 3D printing will change.

So do you foresee anything like the Star Trek food synthesizer or things like that happening any time soon?

Jordan: It will happen, it is going to be in some time, because it has some chemical issues that we have to overcome. At the end of the day you will have to get molecules to bind and so within a single material system, we're going to have a lot of advances very quickly, in fact there some very compelling work going on right now around the world in metals printing, ceramics, polymers and mixing different materials within a family. But trying to get metals and plastics to chemically bond, you know one is using ionic bonding mechanisms, one is using covalent bonding mechanisms, that's fundamental physics, and we can't change that. So we need to come up with some clever ways to be able to mix material systems to be able to print as the replicator in Star Trek does, it will happen but it's going to be quite a ways down the road. **1**

The F-18 has had laser-sintered parts, I think, for the last 12 years, commercial aircrafts now have 3D printed parts as well, and if you go into factories, you see 3D Printing making its way into making fixtures, so that humans are more efficient

multiply. But the material has to obviously come from somewhere, so we are restricted by the laws of physics.

Right now the appeal of 3D printing is only restricted towards faster prototyping of products isn't it? 3D printed objects still don't look as attractive as finished goods. At least the ones we make as hobbyists, so when do you think that would change?

Jordan: On the consumer side I agree with you. On the industrial side 3D printed

mean the worst thing that you could do is try to take a new technology and try to do what you did before with it. It would be like taking your mobile phone and plugging it into your landline and saying well it doesn't work very well. So I think there would be some change in perception and adoption of the products being made by 3D printing because it won't look like what we had before. The new Autodesk printer Ember is using a DLP technology, which is a liquid resin, it's exposing it to

Unwind

How we didn't unwind this month, and really expensive holiday gifts that you can't afford

Community

In these pages we feature great articles, and other projects created by our Digit community of readers

WIN AT Trolling

Trolling, like most art forms isn't easy to master. Until now...

Mithun Mohandas

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In the real world, throwing a nasty insult was often dealt with by use of physical violence. Sarcasm came as a natural evolution to the insult and it wasn't reciprocated with a punch (sometimes it was). The Internet brought along with it the gift of anonymity and all of a sudden the playing field was levelled. After a while, the insults were simply ignored and word-filters came became commonplace. The next step was to circumvent this by either using ASCII images or luring the victim onto a different domain, where the troll had more freedom. Anonymity, circumvention and baiting are still the pillars on which this dastardly skill stands.

Plan**Read the rules**

A proper execution of a trolling attempt relies on you being aware of what could go wrong. Every platform on the internet, be it Facebook, Yahoo! Answers, Quora or StackOverflow have their own set of rules which if violated ensures a quick swing of the ban-hammer. Take it from us, being ejected from a relationship and being banned feel pretty much the same, we know *sniff*.

Pick your target(s)

Start small. Pick someone or an audience that you believe can be easily trolled. This would



This could be you

mean that you need to beat these folks at their own game. You can't come up as a troll, rather you have to make them believe you're one of them.

Prepare

Preparation for a prank should be proportional to its scale. You can't troll the entirety of a forum based on something you cooked up in an hour. Let's say you've chosen to troll a popular anime fan forum. Just putting up a post that says, "OMFG! DOODs Korra is totally gonna die next season!!!" isn't going to elicit the attention you want. Instead, if you took the time to photoshop the character splayed on the floor with blood everywhere and posted that. Followed by two or three fake accounts (each in a different browser with a different proxy) all attesting to your post adds credibility. Then engaging other members and theory-crafting the possible scenarios around

the photo slowly starts making it seem a lot more believable.

For this prank, you had to:


1. Know photoshop
2. Create multiple fake IDs on the forum with a time gap of a few weeks.
3. Spend time and energy learning the lore and engaging your prey

You can probably guess that trolling at this level takes quite the effort. Using some esoteric term from the anime as your user ID on that forum would probably add weight to your opinion.

Learn

Your first few attempts at trolling are probably going to fail, some of you might not even bother after one or two tries. But, stop you mustn't! Failure is but a stepping stone to success. Practise aside, there are certain techniques which will aid you on making people believe your magnum trollus. Logical Fallacies are what you need to perfect. Very few can see through these methods and they always deliver. Don't know what we're talking about? Take a look at our politicians, one wonders why work never gets done. It's because they engage in argumentum ad nauseam, this means to repeat something over and over till nobody cares. Then there is reductio ad absurdum, reducing an argument to an absurd level that makes its converse seem true (e.g. cattle must fart or else they'd blow up from the pressure). There are a lot more fallacies which you can use to win arguments easily.

Troll

For a more comprehensive guide on how to troll people like a boss, go to <http://digit.in/winattrolling> 



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Cicret Bracelet

Seeking any donations, Cicret is a bracelet that can turn your arms into a touchscreen display <http://dgit.in/ArmTouch>



Mechanical change

Have a read on how Logitech plans on reinventing the mechanical keyboard at the Switzerland testing facility <http://dgit.in/LogiMech>

Happy holidays!

While most of us would be happy with a puppy for Christmas, the well-heeled are going to be needing a lot more than that. Here's are some of the most outrageously expensive Christmas presents of the year!



Gold Shoelaces

Mr.Kennedy's Gold shoelaces. These things are supposedly made from pure, hand-woven gold thread and will be hand-delivered to you (by a security guard of course) and laced up at a location of your choice, anywhere in the world. Oh, and they cost a little under \$20,000. If that's a little over budget, you can go for a cheaper, pure silver option.

Neiman Marcus Racing

We will admit, this one made us drool. Just slightly, very slightly. The Neiman Marcus group makes these excruciatingly well-detailed, 1:32 scale models of some of the most epic race tracks in the world, including the famed Nurburgring, and you can race slot cars on these tracks. The "only" real problem? Each track will set you back \$300,000.



Celebrity Robot

No, this is not a robot version of your favourite celeb, but it is a robot that is, by itself, a celebrity and is the only robot that's been admitted to the Screen Actor's Guild. Also, this isn't exactly autonomous either, requiring a remote to control it. But hey, when can you ever really claim to actually own a celeb? You'll need to shell out \$345,000 though.



Diamond pacifiers?

All parents love their babies and most do their best to pamper them silly, but few will have the wherewithal to actually spend \$17,000 on a diamond-studded pacifier for their wee girl. These pacifiers are covered in 278 pave-cut white diamonds embedded in a 14 carat white gold base. The cheapest part on this pacifier is the genuine silicone nipple.

Amour Amour Collar

Christmas isn't just about you, it's about your family as well and that includes the small and furry kind. The Amour Amour Dog Collar is perfectly designed for that pampered pooch of yours. Featuring a 52-carat collar that's covered in over 1600 diamonds and a 7-carat, flawless, colour-graded centrepiece diamond. Price? \$3.2 million. Only.



The smell of money

Well, not money exactly, but when a perfume sells for over \$475,000, it better be worth the price. But it's not just the perfume, your money gets you a first class ticket to Paris, 5-star accommodation and service, a meeting with master perfumer Olivier Creed who'll learn your tastes and provide you with over 330 litres of a tailor made perfume.



Net neutrality in trouble

Telecom provider Bharti Airtel will soon start charging its subscribers extra money for using free services like Skype and others. http://digit.in/Neut_Net



Even Tor isn't safe?

Read this to know all about Tor - the anonymous network and browser and how it isn't safe from hackers anymore. http://digit.in/Tor_Trouble

Unwind

How we [didn't] unwind



WFH

Work From Home was the buzzword of the month. Everyone found some excuse or the other to not come to work. Jayesh claimed to be "working" in the U.S.A. Regidi claimed to be sick and Mithun supposedly charged off to "study". All in all, a very relaxing month for all but one of our team.

Partay! Not!

Jayesh, Regidi and Ant celebrated their birthdays this month. Or rather, didn't. Since nobody came to office, nobody celebrated anything. Sid had to do his best to keep himself busy for many a long, cold night and while we're sure he found something to entertain himself, he's now quite depressed.



Gaming?

Nope. No gaming either. Sid had SM[H] ITE to keep him occupied and Regidi did eventually shell out for Elite: Dangerous, but between work and coordinating with a designer in another time zone, neither of them really had the time to spare for games or anything else. It's been a very unusual month indeed.

digit DIARY

After the madness that was last month—last year now— we fully expected this month to be much worse. This month's issue was going to be pushed out, for all intents and purposes, by Sid and Regidi. Jayesh was in the US, Mithun on study leave, Ant was doing we don't know what, and even though we did have Abhijit, he's still fresh meat. Unsurprisingly however, this month was even worse than we expected.

First, Jayesh was in the US, which you might think is a good thing, but when he ends up getting a peek at one of the routers that forms the Internet's backbone, gets to meet Wired's editor and gorges himself on the most delicious of food, well, stalwart geeks and upright citizens we might be, but we do tend to get jealous. The curses we hurled in his direction were, for the most part, unfair, but we also just kept begging for more. On a side note, Big Daddy did manage to drop in on the venerable Vijay Bhai (our star offsite designer in NY) and as far as we know, they spent quite a wild night in New York (the police reports are still coming in).

Secondly, Regidi caught a severe cold, dehydrated, shrivelled up like a prune and then went into hibernation for the winter, leaving Sid by his lonesome with a magazine to get published, surrounded by the beeping and humming that is the true heart-beat of our test centre. Time loses meaning in our office, all the windows are blackened, and none of the other staff enter without permission. Long hours spent staring at his

screen, with not a soul to talk to and only introspection or the Internet for entertainment seem to have pushed Sid over the edge. Food lost all meaning, serving only as a means of sustenance. He caught himself eating out of a dabba and was slightly repulsed by the smell of the curry, only later realising that the dabba was a day old when the dabbawala wandered upstairs in search of the container. Lined with iron his stomach is, for he suffered no ill effects. Thankfully Mithun and Ant decided to drop in at the nth hour and save him from himself.

In better news, Creepicheep has been caught! If you don't remember, this ravenous rodent has been raiding the editorial team's food supplies for the past few months, escaping with Regidi's last slice of pizza and this month, scavenging an entire croissant off Sid's plate. This pestiferous rodent finally met its doom at the hands of an underpaid office boy when it gave in to the tempting aroma of 3-day old McChicken in a strategically

placed mouse trap. Unfortunately, Creepicheep had fathered offspring before his joyous demise, and now we must hunt down his progeny before they decide to seek revenge. Raaabo is especially freaked out as he has a rat phobia!

An unusual month, even by our standards and given the challenges we had to overcome, you ingrates should be thankful that you have an issue in your hands. We demand tribute, preferably in the form of high praise (we do blush, you know) and a sacrificial minion. Write to editor@digit.in for either.



The Digit SKOAR!board
Difficulty level: <http://digit.in/1DOJYA>
Rats Killed: 1 (Creepicheep I)
Skills learned: Inner Peace Lvl2 (Sid)
Quote of the month: "Why can't I review Far Cry 4 on an Nvidia 210?"
— Ant, the Clueless



Ocean Energy

Toshiba and IHI are working together on building a ocean energy power generation system <http://dgit.in/OceanEner>



Kim to the rescue

Kim Dotcom offered hackers vouchers for his Mega service in exchange to restoring PSN, Xbox Live services <http://dgit.in/KimVoucher>



Every month we highlight some aspiring tech writers and their spirited attempt to get published in the magazine. Let's have more!

How to create your own blog

Blogging isn't dead, it's just become less frivolous, and the wheat has been separated from the chaff. If you're serious about what you do, this guide from our now regular Digit Squad writer Praneet will help you get started



Praneet Sab

Well, what's a blog? It's also a website, the only difference is that, you use it to share things with public that you love to and to earn money. Starting a blog doesn't require a team or a lot of investment but it does require dedication and a little time. I've seen tons of people starting off with their blogs with great enthusiasm but within 2-3 months, falling apart.

Now before we go on, I assume that you have decided the topic on which you'll blog and also a good name for your blog.

As of now, the most popular blogging services are Blogger and WordPress. Both of them serve the same purpose, but with different powers. Blogger is made for beginners and for those who can't afford expenses. Whereas WordPress is made for advanced users and for those who have money (a little would also do). I'll explain more ahead, but before that, you would want an address like "someblog.com" or "someblog.in"; and to get this address you'll need to buy it (and there's no way to get it for free). I personally use bigrock.in and there's a little trick to get a .com domain name for ₹99. All you need to do is, open google.com and then search for ".com for 99" and look out for the ads where one would say something like ".COM Domain Names @ ₹99". Check that the URL is from Bigrock and then click on it and you'll land on a special page which will give you a ".com" domain for ₹99. Now think of a good domain name for your blog, search for its availability and then buy it.

Now the next thing is to decide which blogging service you will go with. Let me give you an introduction to all of them and the steps to set them up.

Blogger

This is a service offered by Google and the best part about it is that you don't ever need to pay for hosting and this really saves

a you a lot of money. In general, hosting a domain would cost you anything about 2-10K a year. There are specialised hosting services too, with tons of complex settings, but with Blogger you really don't need to care about all the back-end programs. But, it compromises on a few aspects. Limitation of plugins and flexibility to customise is the biggest drawback. There are just a handful of plugins available for Blogger and it also doesn't have



those premium themes which WordPress has to offer. Apart from all this, Google is free to use your articles and your content anywhere. But all this shouldn't let you not choose Blogger, because here you'll never face any downtime and your blog can't be hacked easily since Google is behind you. And just because it's free, I personally use this for my blog and recommend this service to anyone who can't afford hosting or maybe who don't want a lot of bells and whistles.

So now how do we get started with it? That's easy and all you need to do is to go over to blogger.com and sign in with your Gmail account. Now click on "New Blog" and a pop-up will



French Drone Delivery

French postal service La Poste, will be delivering packages to rural areas using drones
<http://dgit.in/FrDroneDel>



WarSting Blue

This little sword lights up when it is near a WiFi network, an unsecured one
<http://dgit.in/WarSting>

Digit Squad

appear. Fill in the required details such as the blog title, blog address and of course, choose a template and click on Create a blog. And now you have your own blog which would be live at "blog_address.blogspot.com". Now probably you would like to remove the ".blogspot" part from your blog address. To do so, you need to go to your blog's settings and under Basic settings, click on something which says "+ Set up a third-party URL for your blog". Now enter your URL/blog address that you bought earlier from bigrock or any other service and press save. But wait, an error would occur which will then ask you for additional steps to follow. Open a new tab and go to your Bigrock Dashboard and select your domain name. Under your domain name, check for DNS settings and choose "CNAME" and enter two records as displayed in the error which appeared on blogger's setting page. Save everything on the DNS settings page and now wait for some time (10mins to 24hours) and try again to save the URL on blogger's setting page and it should be saved. If it doesn't, then try again after some time. And now you can start writing posts and share your blog's address.

WordPress


WordPress is meant for those who can afford the hosting and require great professional-looking themes and plenty of plugins to power their blog. WordPress may seem to be typical for beginners but with experience, you'll get used to it. It has the best customization tools and plugins than any other blogging service. There are so many options that a beginner may get confused in WordPress and therefore it's recommended for those who are confident or have a past experience. The only con of WordPress is that it may not be affordable for all, especially students.

There are two options to start off with WordPress, either you can opt for WordPress' own package (which is not recommended) or you can have self-hosted WordPress (which is recommended and popular too!). If in case you still want to go with WordPress' own packages then go to wordpress.com and follow the on-screen instructions but this method isn't advised since the "Free" package isn't worth having and the rest of the packages starts from \$99 per year (6.2K INR). So the option is to go with a "Self-hosted" WordPress, which won't be free since you'll need to purchase hosting. I won't go into the details, but in short, you'll need to buy hosting which offers good amount of space and bandwidth, from somewhere like hostgator or bigrock. Now you'll probably get a welcome email and in there the "Name Servers (ns)" would be specified, copy them and put them in your domain name's settings and wait for 24 hours for propagation and proper linking of host and domain name. Now you'll be able to open "www.yourblogaddress.com" and would be greeted with the default page.

Now you'll need to download WordPress for which you can go to <https://wordpress.org/download/> and download it. Open your hosting's cPanel (details of it would be given in your welcome email) and go to "File manager" and upload the files from WordPress-4.x.x.zip > WordPress > (The content to be uploaded). After the upload is completed, go to "www.yourblogaddress.com/wp-admin/install.php" and follow the on-screen instructions and

you'll be good to go. Read the "readme.html" file if you face any problem during installation.

Now anyone can visit "www.yourblogaddress.com" and it will open up your blog. But wait, it looks ugly and empty. So now go to "www.yourblogaddress.com/wp-admin/" and log in with the credentials that you registered while installing WordPress. Now to post the articles, check the top bar and mouse over something which says "+ New" and then choose "Post" from the list. And there you go. But don't you think that the blog still looks a little ugly? Well you need to get some themes and premium themes look much better. You can get premium themes from WordPress itself, or a better option is to try out <http://themeforest.net/>. To set the theme, you need to open your WordPress's admin panel and then from the left sidebar, mouse over appearance and choose themes; then click "Add new" and upload the new theme. Now this is a *little* of WordPress to get you started off, but still there are a lot of things which can only be learnt with experience. And in any case don't feel low if you can't understand WordPress quickly, always remember that every professional was once a newbie.

Getting a blog for the first time is definitely an awesome feeling, but the truth is that a blog's success is measured by the number of visitors that it gets and not by which blogging service it uses or the premium theme that it has. Having the best content is preferred and the frequency must also be good. Keep blogging. 



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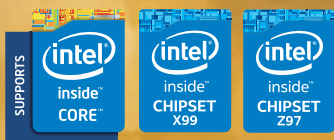
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